Refine Search

Search Results -

Terms	Documents
L10	0

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L12

Refine Search

Recall Text | Clear | Interrupt

Search History

DATE: Friday, April 09, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR			
L12	L10	0	L12
L11	l4 or L10	0	L11
DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR			
L10	((image with size) same upc) and url	1	L10
L9	L4 and url and upc	2	L9
L8	L5 and url and upc	0	L8
L7	L6 and l5	0	L7
L6	705/?.ccls.	2300	L6
L5	unique adj (UPC or (universal adj product adj code))	17	L5
L4	unique adj2 (UPC or (universal adj product adj code))	20	L4
L3	((uPC or (universal adj product adj code)) with unique)	127	L3
	((uPC or (universal adj product adj code)) with unique) same (transform$ or chang$		

L2	or convers$)	2	L2
L1	((uPC or (universal adj product adj code)) with unique) with (transform$ or chang$ or convers$)	0	L1

END OF SEARCH HISTORY

L13: Entry 2 of 17 File: USPT Feb 11, 2003

DOCUMENT-IDENTIFIER: US 6519572 B1
TITLE: Method and system for collecting and processing marketing data

Detailed Description Text (40):
Once a hierarchical coding scheme is adopted, each product or service stored in warehouse 185 (as identified by a unique UPC number) is assigned one or more UIDCs corresponding to the product categories to which the product or service belongs. In the above example, Nike (TM) tennis shoes and Addidas (TM) tennis shoes, each bearing distinct UPC codes, would be assigned the same UIDC corresponding to the tennis-shoe product category.

L13: Entry 10 of 17 File: USPT Nov 7, 1989

DOCUMENT-IDENTIFIER: US 4879456 A
** See image for Certificate of Correction **
TITLE: Method of decoding a binary scan signal

Detailed Description Text (294):
The UPC/EAN decoder can use "like-edge" measurements for most of the character recognition functions. That is to say, measurements are made from the leading (trailing) edge of a bar to the leading (trailing) edge of the next bar. The decoder sums the widths of the individual elements in a bar-space pair to determine the appropriate like-edge measurement, called a 2-term sum. For a UPC character, two 2-term sums are calculated, T.sub.1 and T.sub.2. These are defined as the sums of the first bar, first space and first space, second bar respectively. The definitions and subsequent ones assume that the first element of the character being decoded is a bar. If the first element is a space, the order of the 4 elements of the character should be reversed. The sums T.sub.1 and T.sub.2 generate values ranging from 2 to 5 modules. This provides the capability to distinguish between 16 possible combinations of the sums. (See FIG. 9.1). 12 of the 16 combinations result in unique UPC/EAN character determination. The remaining 4 indicate ambiguous character pairs (even and odd parity 1,7 and 2,8). The two term sums do not give sufficient information to uniquely identify these characters, so more measurements are needed. The nature of these measurements are discussed later in this section. Note that the last space of the character is not used for generation of 2-term sums. This is because the error tolerance on the ending space of the character is significantly larger than the other elements of the character. To determine the size in modules of each 2-term sum, it is normalized by first dividing it by the total character width (T). Since the total width is defined to be 7 modules, module size of each of the sums is in terms of 1/7th's of the total width. Given these calculations, the following decision rules can be established with respect to the interpretation of T.sub.i : ##EQU1## where X.sub.i is the appropriate decision threshold in terms of modules.

L13: Entry 10 of 17 File: USPT Nov 7, 1989

US-PAT-NO: 4879456
DOCUMENT-IDENTIFIER: US 4879456 A
** See image for Certificate of Correction **

TITLE: Method of decoding a binary scan signal

DATE-ISSUED: November 7, 1989

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cherry; Craig D.	Eugene	OR		
Taussig; Andrew P.	Eugene	OR		
Brooks; Michael T.	Veneta	OR		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Spectra-Physics, Inc.	San Jose	CA			02

APPL-NO: 07/ 064110 [PALM]
DATE FILED: June 18, 1987

INT-CL: [04] G06K 7/10

US-CL-ISSUED: 235/462; 235/463
US-CL-CURRENT: 235/462.07

FIELD-OF-SEARCH: 235/463, 235/436, 235/462, 235/466

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4354101	October 1982	Hester	235/463
☐	4687912	August 1987	Ohta	235/463
☐	4782220	November 1988	Shuren	235/463

ART-UNIT: 214

PRIMARY-EXAMINER: [redacted]linen; A. D.

ASSISTANT-EXAMINER: Fuller; Leon K.

ATTY-AGENT-FIRM: Killworth, Gottman, Hagan & Schaeff

ABSTRACT:

A method of decoding a binary scan signal consisting of a bit sequence produced by an electro-optical scanning device as the device scans bar code symbols on a label is disclosed. The bits in the sequence correspond to light and dark spaces making up the bar code symbols. The method includes the steps of: a. supplying the binary scan signal to a storage buffer such that the buffer contains a plurality of bits most recently produced by the scanning device, b. selecting a portion of the bit sequence which defines a large light space, c. subjecting the bits in the sequence following those defining the large light space to a series of tests to determine whether such bits were produced by scanning a bar code symbol which is valid in one or more of several bar codes, d. decoding the bar code symbol in the codes in which it is valid, e. subjecting the next bits in the sequence to a series of tests to determine whether such bits were produced by scanning a bar code symbol which is valid in any of the bar codes in which the previously decoded bar code symbol is valid, f. decoding the bar code symbol in the codes in which it and the previously decoded bar code symbol are valid, and g. repeating steps f. and g. above until all bar code symbols on the label have been decoded.

20 Claims, 1 Drawing figures

L10: Entry 1 of 1 File: USPT Nov 18, 2003

US-PAT-NO: 6651053
DOCUMENT-IDENTIFIER: US 6651053 B1

TITLE: Interactive system for investigating products on a network

DATE-ISSUED: November 18, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rothschild; Leigh M.	Miami	FL		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Barpoint.com, Inc.	Ft. Lauderdale	FL			02

APPL-NO: 09/ 649184 [PALM]
DATE FILED: August 28, 2000

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation-in-part application of International Application PCT/US00/01885, with an international filing date of Jan. 25, 2000, based on Provisional Patent Application, U.S. Serial No. 60/118,051 filed on Feb. 1, 1999, and issued as U.S. Pat. No. 6,430,554 B1, the disclosure of which is incorporated herein by reference. This application is also based on U.S. Provisional Patent Application, U.S. Serial No. 60/185,546, which was filed Feb. 28, 2000 and is entitled "METHOD OF VERIFYING BARCODE/UPC NUMBERS OR OTHER SYMBOLOGIES AND LINKING SUCH NUMBERS TO INFORMATION ON A GLOBAL COMPUTER NETWORK" and U.S. Provisional Patent Application, U.S. Serial No. 60/187,646, which.was filed Mar. 8, 2000 and is entitled "INTERACTIVE SYSTEM FOR INVESTIGATING PRODUCTS ON A NETWORK THROUGH A MOBILE DEVICE", both disclosures of which are incorporated herein by reference.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3; 707/10, 707/104.1
US-CL-CURRENT: 707/3; 707/10, 707/104.1

FIELD-OF-SEARCH: 707/3, 707/4, 707/5, 707/6, 707/10, 707/1, 707/104.1, 707/13R, 707/206, 707/503, 707/504, 707/523, 709/219, 705/23, 705/26, 705/27

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5791991	August 1998	Small	463/41
☐	5804803	September 1998	Cragun et al.	235/375
☐	5905248	May 1999	Russell et al.	235/462.15
☐	5905251	May 1999	Knowles	235/472.01
☐	5913210	June 1999	Call	707/4
☐	5918214	June 1999	Perkowski	705/27
☐	5933829	August 1999	Durst et al.	707/10
☐	5950173	September 1999	Perkowski	705/26
☐	5978773	November 1999	Hudetz et al.	705/23
☐	5979757	November 1999	Tracy et al.	235/383
☐	5992752	November 1999	Wilz, Sr. et al.	235/472.01
☐	6027024	February 2000	Knowles	235/472.01
☐	6101483	August 2000	Petrovich et al.	705/26
☐	6108656	August 2000	Durst et al.	707/10
☐	6123259	September 2000	Ogasawara	235/380
☐	6134548	October 2000	Gottsman et al.	707/5
☐	6317718	November 2001	Fano	705/1
☐	6401085	June 2002	Gershman et al.	707/4

ART-UNIT: 2177

PRIMARY-EXAMINER: Breene; John

ASSISTANT-EXAMINER: Le; Miranda

ATTY-AGENT-FIRM: Casella; Anthony J. Hespos; Gerald E.

ABSTRACT:

An interactive search system for use with a global computer network, e.g., the Internet, using a search identifying barcode to rapidly and effectively obtain a supply of related information for presentation to a user. A computer, either landline based or mobile, may be used to input a UPC code, taken from a package or advertisement or prestored in the computer, to an implementing server on the network. The server contains a database of product and manufacturer identifying UPC codes and uses the input UPC code and the database to identify the manufacturer and is programmed to then perform a search of the network to locate sites relating to or operated by the manufacturer. Also, the server may search the network on a product basis to locate other sites containing the UPC under search. Using "parsing" technology, the server "pulls out" the product description, transmits it to and places it in a random access memory (RAM) or storage of the computer, and proceeds to perform further searching relying on the product description to uncover relevant information. Accordingly, using a single input, a collection of product-related and manufacturer information is quickly assembled in the computer available

for a user's consideration all at once at any time.

42 Claims, 3 Drawing figures

L10: Entry 1 of 1 File: USPT Nov 18, 2003

DOCUMENT-IDENTIFIER: US 6651053 B1
TITLE: Interactive system for investigating products on a network

Brief Summary Text (8):
The UPC system has been adapted for use with computers and networks, such as the Internet, in various ways. For example, U.S. Pat. No. 5,913,210, to C. G. CALL, discloses a system involving the storing of a plurality of UPC's in respective computers with web addresses (URLs) and storing cross-references of the UPC's and URLs in another computer (URL) which can be accessed by further networked computers using the UPC's to find the respective URLs. Also, U.S. Pat. No. 5,804,803, to B. J. CRAGUN ET AL, discloses the retrieval of a document by a client computer system using a scanned UPC to create a URL location in a first server, from UPC and customer data retrieved from a second server, which URL may be used to obtain the document from the first server. Further, U.S. Pat. No. 5,791,991, to M. E. SMALL, discloses an interactive product promotion system which enables the selection of coupons to be downloaded from the Internet, and then UPC's placed thereon to be scanned to the Internet for rebates.

Brief Summary Text (18):
In a further enhancement of the system utilizing a mobile device, the UPC can be input into a wireless portable computer, e.g., an Internet-enabled Portable Digital Assistant (PDA) or a wireless Internet or server accessible phone, and transmitted either directly or indirectly to the implementing server to obtain product information. The portable computer may be provided with software to interact through a wireless transmission path with the server and obtain the information as described above at a retail location. With this capability, a customer can investigate a product while he is present in a retail location and contemplating purchase of the product. For example, a user going to the local mall to go shopping sees various items that he would like to consider buying in the future or learning more about but does not want to purchase this day. The user enters the UPC number for the item (or a barcode number or other symbology if a UPC number is not available) and the user receives an immediate image of the item on his mobile device. If the user wants additional information on the item, he can "click" on the image of the item and additional information including textual information, videos and photos pertaining to the item will be presented to the user. The user continues shopping in the mall and gathers additional items that he is interested in to create a "wish list". The user now goes to his home or office and is able to share the information he has collected on the various items with any other interested party. The user can display these items on their mobile device, including on-demand increasing (scaling) the size of the images of the items and requesting from the mobile device additional information on the items (perhaps price comparisons or reviews). The user can also transfer all information on the mobile device to another mobile device or transfer the information to a landline based computer. In essence, the user has taken real items and effortlessly brought them into his mobile device and then into his home or office.

Brief Summary Text (23):
A further capability for facilitating network searching may be provided that

enables a user to "plug in" to a graphical browser, such that by entering the category of product item to be searched followed by the UPC number in the URL entry line of the browser, the product search will be carried out directly without the user first having to go to a web site and then searching for the product information. Alternatively without a browser "plug in", the user could just enter a specific URL web address into any graphical global network browser with the optional category and with a UPC or code number to let the implementing server institute the search.

Detailed Description Text (4):
In a further enhancement of the system utilizing a mobile device, the UPC can be input into a wireless portable computer 20, e.g., an Internet-enabled Portable Digital Assistant (PDA) or wireless Internet or server accessible phone, and transmitted either directly or indirectly to the implementing server 14 to obtain product information. The portable computer 20 may be provided with software to interact through a wireless transmission path with the server 14 and obtain the information as described above at a retail location. With this capability, an individual can investigate a product while present in a retail location and contemplating purchase of the product. For example, a user going to the local mall to go shopping sees various items that he would like to consider buying in the future or learning more about but does not want to purchase this day. The user enters the UPC number for the item (or a barcode number or other symbology if a UPC number is not available). The device receives the UPC code or other symbology to make sure that it is valid. The device then uses its wireless capabilities to send the code string to a server which is connected to the global computer network, i.e., the Internet. The server checks the string and using database lookup procedures resolves which item in the database relates to the search string. The server then sends back to the mobile device an image on this item. If the user wants additional information on the item, he can "click" on the image of the item and additional information including textual information, videos and photos pertaining to the item will be presented to the user. This information is stored within memory (random access memory or permanent data storage) on the mobile device. When the user wishes to access the information on the mobile device, this memory is accessed and images, video, and/or text are displayed. The user continues shopping in the mall and gathers additional items that he is interested in to create a "wish list". The user now goes to his home or office and is able to share the information he has collected on the various items with any other interested party. The user can display these items on their mobile device, including on-demand increasing (scaling) the size of the images of the items and requesting from the mobile device additional information on the items (perhaps price comparisons or reviews). The user can also transfer all information on the mobile device to another mobile device or transfer the information to a landline based computer. In essence, the user has taken real items and effortlessly brought them into his mobile device and then into his home or office.

Detailed Description Text (10):
A further capability for facilitating network searching may be provided that enables a user to "plug in" to a graphical browser. The user enters the category of product item to be searched followed by the UPC number in the URL entry line of the browser, and the browser is then used by the implementing server to carry out the product search directly without the user first being connected to a web site for viewing and then searching for the product information. Alternatively without a browser "plug in", the user could just enter a specific URL web address into any graphical global network browser with the optional category and with a UPC or code number to let the implementing server institute the search.

Detailed Description Text (12):
A preferred exemplary procedure for utilizing the present invention beginning with a user entering a UPC number until the search results provide stored information for displaying manufacturer, product, web page, and other information, will now be

described with reference to FIG. 2. Step 1: A user by means of an electronic terminal, e.g., a computer, inputs selected barcode information on the object of the search, e.g., a UPC number, and a selected optional product category to the web site (URL) of an implementing server containing databases relating the input coded information and product category to other web sites on a global network. Step 2: The server is programmed to run extensive checks to verify that the UPC number entered is valid. This verification process is shown in FIG. 3 as described above in detail. These checks may include making sure that the length of the number is valid for the category selected, that books begin with "978", that the checksum digit is correct, that no alpha characters are entered where not allowed, and several other steps depending on the category selected. If the UPC is not valid, a signal is returned to the input terminal to indicate the UPC is incorrect. A valid UPC is coupled to the next step. Step 3: If a book or audio book category is selected, the UPC number is converted to an ISBN number, and other appropriate conversions may be carried out. After any necessary conversions, the number is used to address the server databases. Step 4: The server's UPC manufacturer's databases are queried (using the first 6 digits of the UPC number) to find the most current information on the publisher and/or manufacturer identified by the UPC code. The server's data sources indicate the category or categories of the products for which the identified publisher and/or manufacturer is registered, and that information is used to verify that the user input the correct optional product category. If the user inputted an incorrect or unknown category, what data sources to use to find the product will be indicated. Step 5: Many sources are then queried (both local databases and Internet databases) using the UPC or ISBN number to find the most current information available on the product of the selected category. Step 6: If the product information is found, the information is sent from the server and stored in memory at the user terminal for use together in a body at any time. Also, a "Search Results" Web page may be displayed with all the appropriate information, including links (either by UPC number or product description) to many other sources for additional information. Step 7: If the product information is not found, a signal is sent from the server and a web page is displayed indicating such, and allowing the user to input (Step 1) an alpha description of the product that is being sought. If the manufacturer's information is then found (Step 6), it may be stored and displayed based on the UPC number entered. Step 8: To further the product information search, the system then reverts to "Step 6", using the user-input alpha description as a link to the other sources for additional information. Step 9: When all of the selected product and manufacturer information has been searched and found, it will be collected and stored in a database in memory at the user terminal enabling the user to readily review all of the found information at one time at any time.

L9: Entry 1 of 2 File: USPT Sep 23, 2003

DOCUMENT-IDENTIFIER: US 6625581 B1
TITLE: METHOD OF AND SYSTEM FOR ENABLING THE ACCESS OF CONSUMER PRODUCT RELATED INFORMATION AND THE PURCHASE OF CONSUMER PRODUCTS AT POINTS OF CONSUMER PRESENCE ON THE WORLD WIDE WEB (WWW) AT WHICH CONSUMER PRODUCT INFORMATION REQUEST (CPIR) ENABLING SERVLET TAGS ARE EMBEDDED WITHIN HTML-ENCODED DOCUMENTS

Abstract Text (1):
Method of and system for delivering consumer product related information to consumers over the Internet. The system and method involves creating an UPN-encoded Consumer Product Information (CPIR) enabling Applet for each consumer product registered within a manufacturer-managed UPN/URL database management system. Each CPIR-enabling Applet is encapsulated within an executable file and then stored in the UPN/URL database management system. Each CPIR-enabling Applet is searchable and downloadable by, for example, (1) retailers purchasing products from an electronic-commerce enabled product catalog, (2) advertisers desiring to link consumer product information to Web-based product advertisements, or (3) anyone having a legitimate purpose of disseminating such information within the stream of electronic commerce. After downloading and extraction from its encapsulating file, the CPIR-enabling Applet is embedded within an HTML-encoded document associated with, for example, an EC-enabled store, on-line auction site, product advertisement, Internet search engine or directory, and the like. Upon encountering such an Applet-encoded HTML document on the WWW, the consumer need only perform a single mouse-clicking operation to automatically execute the underlying CPIR-enabling Applet (on either the client or server side of the network), causing a UPN-directed search to be performed against the manufacturer-defined UPN/URL Database, and the results thereof displayed in an independent Java GUI, without disturbing the consumer's point of presence on the WWW. Preferably, the CPIR-enabling Applets are realized using Java.TM. technology, although it is understood that alternative technologies can be used to practice the system and methods of the present invention.

Brief Summary Text (5):
Dissemination of consumer-product information between manufacturers and their retail trading partners must be accurate and timely. The traditional methods of phone calls and faxes are time consuming and resource intensive. An electronic Universal Product Code (UPC) Catalog (i.e. database system), accessible 24 hours a day, is a solution. In 1988, QuickResponse Services (QRS), Inc. Of Richmond, Calif., introduced the first independent product information database, using the retail industry standard UPC numbering system. Today the QRSolutions.TM. Catalog contains information on over 52 million products from over 1500 manufacturers. The QRSolutions Catalog is a Windows-based application providing a critical information flow link between the retailers and the manufacturers along the supply and demand chain.

Brief Summary Text (6):
After assigning a UPC number to each item, the manufacturer organizes and sends the data via an electronic data interchange (i.e. EDI) transmission, or a tape, to QRS, Inc. to be loaded into the UPC Catalog database. Changes to the data can be made on a daily basis. Retailers with access to a manufacturer's data can view and download the data once it has been added or updated. Automatic update capabilities ensure

the most recent UPC data will be in the EDI mailbox of each retailer customer quickly.

Brief Summary Text (7):
The effect of a centralized database such as QRS's UPC Catalog improves the flow of merchandise from the manufacturer to the retailer's selling floor and ultimately to the consumer. With the UPC Catalog, accurate, up-to-date product information is available when the retailer needs it, eliminating weeks from the order cycle time.

Brief Summary Text (8):
In addition to the electronic UPC-based product information subsystem (i.e. UPC Catalog) described above, a number of other information subsystems have been developed for the purpose of providing solutions to problems relating to electronic commerce (EC) merchandising and logistics within the global supply chain. Such ancillary information subsystems include, for example: Sales, Analysis and Forecasting Subsystems for producing and providing retailers with information about what products consumers are buying; Collaborative Replenishment Subsystems for determining what products retailers can buy in order to satisfy consumer demand at any given point of time; and Transportation and Logistics Information Subsystems for producing and providing retailers with information about when products purchased by them (at wholesale) will be delivered to their stores. Typically, such information subsystems are connected to various value added information networks in order to efficiently offer such information services t o retailers on a global basis.

Brief Summary Text (17):
U.S. Pat. No. 5,640,193 to Wellner discloses a system and method for accessing and displaying Web-based consumer product related information to consumers using a Internet-enabled computer system, whereby in response to reading a URL-encoded bar code symbol on or associated with a product, the information resource specified by the URL is automatically accessed and displayed on the Internet-enabled computer system. While this system and method enables access of consumer product information related information resources on the WWW by reading URL-encoded bar code symbols, it requires that custom URL-encoded bar code symbols be created and applied to each and every consumer product in the stream of commerce.

Brief Summary Text (18):
U.S. Pat. No. 5,978,773 to Hudetz, et al discloses a solution to the problem presented by the system and method of U.S. Pat. No. 5,640,193, by proposing the use of a UPC/URL database in order to translate UPC numbers read from consumer products by a bar code scanner, into the URLs of published information resources on the WWW relating to the UPC-labeled consumer product.

Brief Summary Text (19):
While U.S. Pat. No. 5,978,773 provides an effective solution to the problem presented by U.S. Pat. No. 5,640,193, it completely fails to recognize or otherwise address the myriad of problems relating to UPC/URL-link collection, management, delivery, access and display along the retail supply and demand chain, which the system and method of U.S. Pat. No. 5,978,773 presents and must be first solved in order deliver a technically feasible, globally-extensive, UPC-driven consumer product information system for the benefit of consumers worldwide.

Brief Summary Text (24):
Another object of the present invention is to provide such a system with an Internet-based product information database subsystem which, for each commercially available consumer-product, stores a number of information elements including: the name of the manufacturer; the Universal Product Code (UPC) assigned to the product by the manufacturer; one or more URLs specifying the location of information resources (e.g. Web-pages) on the Internet relating to the UPC-labeled consumer-product; and the like.

Brief Summary Text (25):
Another object of the present invention is to provide such a system, in which the URLs stored in the Internet-based product information database are categorically arranged and displayed according to specific types of product information (e.g., product specifications and operation manuals; product wholesalers and retailers; product advertisements and promotions; product endorsements; product updates and reviews; product warranty/servicing; related or complementary products; product incentives including rebates, discounts and/or coupons; etc.) that relate to the kind of information required, desired or otherwise sought by consumers, wholesalers, retailers and/or trading partners; product prices at which the products are being offered for sale by a particular retailer; and the like.

Brief Summary Text (31):
Another object of the present invention is to provide such a system and method, wherein virtually any type of product can be registered with the system by symbolically linking or relating (i) its preassigned Universal Product Number (e.g. UPC or EAN number) or at least the Manufacture Identification Number (MIN) portion thereof with (ii) the Uniform Resource Locators (URLs) of one or more information resources on the Internet (e.g. the home page of the manufacturer's Web-site) related to such products.

Brief Summary Text (32):
Another object of the present invention is to provide such a system and method wherein a Web-based document transport subsystem is provided for use by manufacturers as well as their advertisers and agents in registering the UPNs (e.g. UPC numbers) of their products and the URLs of the information resources related to such products.

Brief Summary Text (33):
Another object of the present invention is to provide such a system with a number of different modes of operation, namely: a Manufacturer/Product Registration Mode, wherein manufacturers can register their companies and consumer products (e.g. UPC numbers and URLs) with the system; an UPN-Directed Information Access Mode, wherein consumers can access and display information menus containing UPC numbers linked to URLs pointing Web pages containing consumer product related information by scanning the UPC label on the consumer product or by entering the UPC number thereof into a data-entry screen displayed by the system in this mode; a Manufacturer Website Search Mode, wherein the home page of a manufacturer's Web-site can be automatically accessed and displayed by scanning the UPC label on any consumer product of the manufacturer or by entering the UPC number thereof into a data-entry screen displayed by the system in this mode; a Trademark-Directed Search Mode enabling consumers to use trademarks and/or tradenames associated with consumer products to search for consumer-product related information registered within the system; and a Product-Description Directed Search Mode enabling consumers to use product descriptors associated with particular consumer products to search for consumer-product related information registered within the system.

Brief Summary Text (38):
Another object of the present invention is to provide such a system in which a relational database, referred to as "an Internet Product Directory (IPD)," is realized on one or more data-synchronized IPD Servers for the purpose of registering product related information, namely: (i) information representative of commercial product descriptions, the trademarks used i n connection therewith, the company names providing and/or promoting such products, the E-mail addresses of such companies, and the corresponding URLs on the Internet specifying current (i.e. up-to-date) Internet Web-site locations providing product-related information customized to such products.

Brief Summary Text (39):

Another object of the present invention is to provide such a product information finding and serving system, wherein the URLs symbolically linked to each registered product in the IPD Servers thereof are categorized as relating primarily to Product Advertisements, Product Specifications, Product Updates, Product Distributors, Product Warranty/Servicing, and/or Product Incentives (e.g. rebates, discounts and/or coupons), and that such URL categories are graphically displayed to the requester by way of easy-to-read display screens during URL selection and Web-site connection.

Brief Summary Text (40):
A further object of the present invention is to provide an Internet-based System wherein: (1) manufacturers and their agents are enabled to simply link (i.e. relate), manage and update within a centralized database, the UPC (and/or UPC/EAN) numbers on their products and the Uniform Resource Locators (URLs) of HTTP-encoded document (i.e. Web pages) containing particular kinds of consumer product-related information published on the Internet by the manufacturers, their agents and/or third parties; and (2) consumers, in retail stores, at home, in the office and on the road, are enabled to simply access such consumer product-related information using such UPC (and/or UPC/EAN) numbers and/or by scanning UPC (or UPC/EAN) bar code symbols encoded with such product identification numbers.

Brief Summary Text (41):
Another object of the present invention is to provide a novel method of carrying out electronic-type commercial transactions involving the purchase of products which are advertised on the Internet at uniform resource locations (URLs) that are registered with the IPI system of the present invention.

Brief Summary Text (42):
Another object of the present invention is to provide a novel system and method of finding the UPN or USN associated with any particular registered product, respectively, by simply selecting a Java GUI button on the Internet browser display screen in order to enter a "Trademark-Directed Search Mode", whereby (i) a dialogue box is displayed on the display screen requesting any known trademarks associated with the product, and/or the name of the company that makes, sells or distributes the particular product, and (ii) the corresponding UPN (i.e. UPC number or EAN number) registered with the IPD Servers is displayed to the user for acceptance, whereupon the Internet Uniform Resource Locators (URLs) are automatically accessed from the IPD Servers and displayed on the display screen of the Internet browser for subsequent URL selection and Web-site connection.

Brief Summary Text (43):
Another object of the present invention is to provide such a system and method, wherein during the Trademark-Directed Search Mode, the UPN (e.g. UPC or EAN number) associated with any registered product can be found within the database of the IPD Server using any trademark(s) and/or the company name commonly associated with the product.

Brief Summary Text (45):
Another object of the present invention is to provide a consumer product information access terminal located at a point-of-sale (POS) station, wherein the bar code symbol reader integrated with the POS station can be used to read the UPC numbers on consumer products being offered for sale in the store in order to access consumer product related information from hyper-linked Web-sites on the Internet, for display on an LCD screen located at the POS station and viewable from various positions by the sales clerk as well as consumer shoppers.

Brief Summary Text (46):
Another object of the present invention is to provide a system and method, wherein one or more computer-based kiosks are installed within retail shopping environments and each such kiosk has an automatic bar code symbol reader for reading the UPC

numbers on consumer products being offered for sale in the store, and also an LCD touch-type display screen for displaying product-related information accessed from hyper-linked Web-sites on the Internet.

Brief Summary Text (47):
Another object of the present invention is to provide such a system and method, wherein one or more computer-based kiosks are installed within retail shopping environments and each such kiosk has an automatic bar code symbol reader for reading the UPC numbers on consumer products being offered for sale in the store, and also a LCD touch-type display screen for displaying product-related information accessed from hyper-linked Web-sites on the Internet.

Brief Summary Text (49):
Another object of the present invention is to provide such a consumer product information kiosk, wherein the laser scanning bar code symbol reader has a cordless interface with the kiosk so that it may be moved about within a retail store in a portable manner to scan UPC labels and access consumer product related information.

Brief Summary Text (52):
Another object of the present invention is to provide a Web-based information delivery system and method, wherein the computer-based kiosks employed throughout the hosting retailer's store are capable of displaying the price of products offered for sale in the store upon reading the UPC bar code symbol thereon.

Brief Summary Text (54):
Another method of the present invention is to provide such a method of database construction, wherein the relational database is initially "seeded" with: (i) the Manufacturer Base UPC Numbers based on the six digit UPC Manufacturer Identification Numbers (MIN) assigned to the manufacturers by the UCC and incorporated into the first six characters of each UPC number applied to the products thereof; and (ii) the URLs of the Web-site home pages of such manufacturers.

Brief Summary Text (55):
Another method of the present invention is to provide such a method of database construction, wherein the "seeded" relational database is then subsequently extended and refined with the participation of each registered manufacturer (and/or agents thereof) by adding to the "seeded" database (iii) the 12 digit UPC numbers assigned to each product sold thereby and the menu of URLs symbolically linked to each such corresponding product.

Brief Summary Text (58):
Another object of the present invention is to provide a novel system and method for finding and serving consumer-product related information on the Internet, accessible from the Websites of each manufacturer who has registered its UPN/URLs with the system's "central" IPD Database.

Brief Summary Text (59):
Another object of the present invention is to provide such a system an d method, wherein as part of the consumer product registration process, the manufacturer (or retailer) maintains a limited-version of the UPN/URL database which contains a list of categorized URLs for each UPC-encoded product that it sells.

Brief Summary Text (60):
Another object of the present invention is to provide such a system and method, wherein the consumer product related information links contained within the limited-version of the UPN/URL Database of each registered manufacturer (or retailer) can be accessed from the manufacturer's (or retailer's) company Website and served to consumers requesting such information by way of UPC (or EAN) number

entry.

Brief Summary Text (61):
Another object of the present invention is to provide such a system and method, wherein input HTML forms for searching the limited-version of the UPN/URL Database of each registered manufacturer (or retailer) can be accessed by selecting a predesignated Check Button on the Java GUI to a Website providing access thereto.

Brief Summary Text (62):
Another object of the present invention is to provide such a system and method, wherein the limited-version of the UPN/URL Database of each registered manufacturer (or retailer) is used to update a "central" or "master" UPN/URL Database which is continuously maintained and made accessible to consumers (i) through Web-based kiosks installed in licensed retail environments and (ii) through Internet-enabled client subsystems located at home, work and school.

Brief Summary Text (63):
Another object of the present invention is to provide such a system and method, wherein at the time of registering each manufacturer (or retailer) with the system, an Internet-based registration server automatically transmits a computer program to the manufacturer's (or retailer's) computer system for use in constructing and maintaining the limited-version UPN/URL Database related to the manufacturer's (retailer's) products.

Brief Summary Text (64):
Another object of the present invention is to provide such a system and method, wherein the limited-version UPN/URL Database of each registered manufacturer (or retailer) can be served from the manufacturer's (or retailer's) Internet information server using a Common Gateway Interface program (CGI).

Brief Summary Text (65):
Another object of the present invention is to provide such a system and method, wherein the limited-version UPN/URL database of each registered manufacturer (or retailer) is realized using a cross-platform compatible, relational database management system (RDBMS).

Brief Summary Text (67):
Another object of the present invention is to provide an Internet-based consumer product information collection, managing and delivery system and method, wherein for each consumer product registered within the UPN/URL database of the system, there is created and stored, an interactive consumer product information request (CPIR) enabling Applet (e.g. based on Java.TM. component principles or MicroSoft's Active-X technology) which, when executed upon the initiation of the consumer through a mouse-clicking operation, automatically causes a preassigned CPID-enabling Java GUI to be displayed at the consumer's point of presence in Cyberspace, revealing the results of a consumer product information display conducted upon the product identified by the UPN encoded within the executed Applet.

Brief Summary Text (68):
Another object of the present invention is to provide such an Internet-based consumer product information collection, managing and delivery system and method, wherein (1) the UPN assigned to a particular consumer product by the manufacturer and (2) the URL of the Java script running on the IPD server of the system are encoded within the CPIR-enabling Applet so that, upon execution of the Applet, a consumer product information display (CPID) Java GUI is automatically produced for the consumer's convenience.

Brief Summary Text (69):
Another object of the present invention is to provide an Internet-based consumer

product information collection, managing and delivery system and method, wherein the CPID-enabling Java GUI automatically displays a manufacturer-defined menu (i.e. list) of categorized URLs pointing to information resources on the Internet (e.g. WWW) relating to the consumer product identified by the UPN encoded within the CPIR-enabling Applet.

Brief Summary Text (71):
Another object of the present invention is to provide such an Internet-based consumer product information collection, managing and delivery system and method, wherein CPIR-enabling Applets are created, distributed, embedded within a HTML-encoded document related to a particular consumer product, and subsequently executed by a consumer so as to access and display a manufacturer-defined menu (i.e. list) of categorized URLs pointing to product-related Web-documents.

Brief Summary Text (81):
Another object of the present invention is to provide a new method of and system for purchasing a consumer product over the Internet (e.g. WWW) comprising the steps of: embedding a UPN-encoded CPIR-enabling Applet within the HTML-code of a consumer product advertisement, wherein the CPIR-enabling Applet when executed displays a categorized URL menu containing one or more URLs pointing to one or more EC-enabled stores or on-line catalogs on the WWW at which the consumer product identified by the encoded UPN can be purchased and delivered to a particular address in physical space.

Brief Summary Text (82):
Another object of the present invention is to provide a novel cyber-kiosk, launchable from predefined points of presence within an EC-enabled store, on-line product catalog or other type of WWW site, for enabling consumers (including retail purchasing agents) to quickly access and display at the predefined point of presence, an interactive menu of categorized URLs pointing to consumer product related information resources published on the WWW and symbolically linked to the UPNs of consumer products within a centralized UPN/URL database management subsystem, by manufacturers and/or their agents.

Brief Summary Text (83):
Another object of the present invention is to provide a novel EC-enabled product catalog having a library of CPIR-enabling Applets embeddable within graphical images of consumer products in HTML-encoded documents and enabling, when executed, a UPN-directed search within the UPN/URL database management subsystem and the display of an interactive menu of categorized URLs pointing to consumer product related information resources published on the WWW and symbolically linked to the UPNs of consumer products within a centralized UPN/URL database management subsystem, by manufacturers and/or their agents.

Drawing Description Text (3):
FIG. 1 is a schematic diagram illustrating the various information subsystems provided by the consumer-product information collection, transmission and delivery system of invention along the consumer-product demand chain, namely an Internet-based Product-Information (IPI) Finding and Serving Subsystem, a UPC-based Product-Information Subsystem ("UPC Catalog"), an Electronic Trading Information Subsystem, a Sales Analysis and Forecasting Information Subsystem, Collaborative Replenishment Information Subsystem, and a Transportation and Logistics Information Subsystem;

Drawing Description Text (4):
FIGS. 2-1 and 2-2 show a schematic diagram of the consumer-product information collection, transmission and delivery system of the illustrative embodiment hereof shown embedded with the infrastructure of the global computer communications network known as the "Internet", and comprising a plurality of data-synchronized Internet Product Directory (IPD) Servers connected to the infrastructure of the Internet, a UPNIURL Database Subsystem (i.e. UPN/URL Database) connected to one or

more of the IPD Servers and one or more global[illegible]-extensive electronic data interchange (EDI) networks, a Web-based Document Server connected to at least one of the IPD Servers and the Internet infrastructure, a Web-based Document Administration Computer connected to the Web-based Document Server by way of a TCP/IP connection, a plurality of manufacturer-related electronic-commerce (EC) information servers for hosting EC-enabled stores or EC-enabled on-line catalogues of manufacturers, a plurality of retailer-related electronic-commerce (EC) information servers for hosting EC-enabled stores or EC-enabled on-line catalogues of retailers, a plurality of Internet Product-Information (IPI) Servers connected to the infrastructure of the Internet for serving consumer-product related information to consumers in retail stores and at home, a plurality of Client Subsystems connected to the infrastructure of the Internet and allowing manufacturers to transmit consumer-product related information to the Web-based. Document Server for collection and retransmission to the IPD Servers, and a plurality of Client Subsystems connected to the infrastructure of the Internet and allowing consumers in retail stores and at home to request and receive consumer-product related information from the IPD Servers;

Drawing Description Text (5):
FIG. 2A is a schematic diagram illustrating the flow of information along the consumer-product supply and demand chain, including (i) the communication link extending between the information subsystems of manufacturers of UPC-encoded products and the centralized (or master) UPNIURL Database Management Subsystem 9 of the consumer-product information collection, transmission and delivery system of the present invention, (ii) the communication link extending between the UPN/URL Database Management Subsystem and the IPD Servers of the present invention, (iii) the communication link extending between the IPD Servers and in-store Client Subsystems of retailers, (iv) the communication link extending between the IPI Servers and the in-store Client Subsystems of retailers, (v) the communication link extending between the IPD Servers and the Client Subsystems of consumers, (vi) the communication link extending between the Servers and the Client Subsystems of consumers, and (vii) the communication link extending between the UPN/URL Database Management Subsystem and the EC-enabled UPN-based Consumer Product Catalogue Server (s) of the present invention for providing consumer product catalogue services to retailer purchasing agents and others and enabling the on-line purchase of consumer products between trading partners (e.g. manufactures and retailers) using EDI (or XML/EDI) based business-to-business electronic commerce transactions;

Drawing Description Text (10):
FIG. 2C is a schematic representation of a portion of the system shown in FIGS. 2-1 and 2-2, wherein a plurality of manufacturer-operated client subsystems are shown connected to a local or wide area IP-based network, preferably maintained behind a secure corporate firewall, and the secured manufacturer information network is connected to the infrastructure of the Internet by way of an Internet router and server, for the purpose of enabling different departments within a business organization (e.g. marketing, sales, engineering, support and service, advertising, finance, etc.) manage different types of UPN/URL links based on the type of information contained within the URL-specified information resource on the WWW;

Drawing Description Text (17):
FIG. 3A5 is a graphical representation of a fifth illustrative embodiment of the client computer system of the present invention realized in the form of a consumer product information access terminal, designed for use as a "sales agent's tool" at a point-of-sale (POS) station in retail shopping environments, wherein the information access terminal has a bar code symbol reader integrated with the POS station for reading the UPC numbers on consumer products being offered for sale in the store, and also a LCD screen capable of being mounted in various viewing positions for displaying consumer product-related information accessed from a centralized database interconnected to the Internet;

Drawing Description Text (21):
FIG. 3B is a schematic representation of an exemplary display screen produced by a (graphical user interface) Java GUI-based web browser program running on a client subsystem and providing an on-screen IPD Web-site Find Button (e.g. UPC REQUEST.TM. Central Website Find Button) for instantly connecting to the IPD Web-site (e.g. UPC REQUESTM Central Website) and carrying out the consumer product information finding and serving method of the present invention;

Drawing Description Text (22):
FIG. 3C is a schematic representation of an exemplary display screen produced by a Java GUI-based Internet browser or communication program running on a client subsystem and displaying a Netscape-style browser "display framework", served from the IPD Web-site (e.g. UPC REQUES.TM. Central Website), and supporting or providing a sponsor frame for sponsor advertisement, a control frame with Check-Box type buttons for activating any mode of the IPI finding and serving subsystem, and an information frame for displaying HTML documents (instructions, forms, and the like) in accordance with the principles of the present invention;

Drawing Description Text (23):
FIG. 4A1 is a schematic representation of the relational-type IPI Registrant Database maintained by each IPD Server configured into the system of the illustrative embodiment of the present invention, showing the information fields for storing (i) the information elements representative of the UPN (e.g. UPC data structure, EAN data structure, and/or National Drug Code (NDC) data structure), URLs, trademark(s) (TM.sub.i), Company Name (CNi) and company address, Product Description (PD.sub.i), E-Mail Address (EMAJ) thereof symbolically-linked (i.e. related) for anumber of exemplary IPI Registrants listed (i.e. registered) with the IPI Registrant Database maintained by each IPD Server, image files for registered consumer products, and consumer product information request (CPIR) enabling Applets for access by retailers, wholesalers, advertisers, Web publishers, and the like, and insertion within the HTML code of Web documents on various types of Internet information servers hosting WWW sites, as well as EC-enabled WWW-sites, EC-enabled stores and/or on-line e-commerce product catalogues, so that when executed, these CPIR-enabling Applets automatically access a categorized URL menu containing URLs (identified in FIG. 4A2) specifying the location of manufacturer-linked information resources on the Internet pertaining to a particular UPN-labeled product;

Drawing Description Text (24):
FIG. 4A2 is a schematic representation of the information subfield structure of the URL Information Field of the IPI Database of FIG. 4A1, showing the Product Advertisement Information Field, the Product Specification (Description/Operation) Information Field, the Product Update Information Field, the Product Distributor/Reseller/Dealer Information Field, the Product Warranty/Servicing Information Field, the Product Incentive Information Field thereof, the Product Review Information Field, the Related Products Information Field, and Miscellaneous Information Fields detailed hereinafter;

Drawing Description Text (43):
FIG. 4M1 is a graphical illustration of an Internet browser display screen that might be displayed on a client computer subsystem hereof while browsing the Library of CPIR-Enabling Java Applet (HTML tags) maintained within the UPN/URL RDBMS shown in FIGS. 2-1 through 2A, wherein the user (e.g. retail purchasing agent, product catalog manager, advertising agent, or whomever) is provided with the option of viewing and downloading, for each UPN-specified product in the system, an executable file containing the HTML tag for either a client-side or server-side type CPIR-enabling Java Applet associated therewith;

Drawing Description Text (48):
FIGS. 4Q1 and 4Q2 set forth graphical illustrations of Internet browser display screens that might be displayed on a client computer subsystem hereof while

visiting an on-line EC-enabled auction site (e.g. at http://www.ebay.com) when considering whether or not to place a bid on a particular consumer product displayed within the auction listings thereof, and then launching a CPI search enabling GUI in accordance with the principles of the present invention by clicking on the HTML tag of a URL-encoded client-side or server-side Applet embedded within the HTML code of the displayed on-line auction Web page;

Drawing Description Text (51):
FIG. 4S3 sets forth a graphical illustration of an Internet browser display screen that might be displayed on a client computer subsystem hereof in automatic response to a consumer selecting a URL displayed in the "Buy On The Web" URL category displayed on the Internet browser display screen of FIG. 4S2, thereby enabling the purchase of the advertised product or service at an EC-enabled store or product catalogue specified by the selected URL;

Drawing Description Text (53):
FIG. 5A is a schematic diagram illustrating the high level structure of communication protocol that can be used among the client subsystem C.sub.a, the IPD Server S.sub.b, and the Web-based Document Server S.sub.WD (30) of the IPI Finding And Serving Subsystem hereof when, from any particular client subsystem, the subsystem is engaged is in Manufacturer/Product Registration Mode of operation, requesting as input a URL which automatically connects the client subsystem to the Web Document Server associated with the Manufacturer/Product Registration Subsystem of the present invention;

Drawing Description Text (54):
FIG. 5B is a schematic diagram illustrating the high level structure of a communicati protocol that can be used among the client subsystem C.sub.a, the IPD Server S.sub.b, and the IPI Server S.sub.c of the IPI Finding and Serving Subsystem hereof when the subsystem is in its Manufacturer Website Search Mode of operation, requesting as input a UPN (e.g. UPC or EAN) associated with a manufacturer's product, and providing as output the URL of the home page of the manufacturer's Web-site and automatically displaying the same;

Drawing Description Text (55):
FIG. 5C is a schematic diagram illustrating the high level structure of a communication protocol that can be used among the client subsystem C.sub.a, the IPD Server S.sub.b, and the IPI Server S.sub.c of the IPI Finding And Serving Subsystem hereof when the subsystem is in its UPN-Directed Information Access Mode of operation, requesting as input a UPN associated with the consumer product, and providing as output the set of URL(s) registered with the consumer product identified by the UPN within the database of the system and pointing to HTML-encoded documents containing particular types of product-related information;

Drawing Description Text (57):
FIG. 5E is a schematic diagram illustrating the high level structure of a communication protocol that can be used among the client subsystem C.sub.a, the IPD Server S.sub.b, and the IPI Server S.sub.c of the IPI Finding And Serving Subsystem hereof when the subsystem is in its Product-Description Directed Search Mode of operation, requesting as input a product descriptor related to the consumer product on which information is sought and providing as output the trademark, company name and URL(s) related to the product descriptor within the database of the system and pointing to HTML-encoded documents containing particular types of product-related information;

Drawing Description Text (64):
FIG. 8 is a schematic representation of a portfolio of Web-sites supported and managed by the UPN/URL database management subsystem with the assistance of the manufacturer/product registration subsystem and Web-enabled client subsystems operated by manufacturers and/or their agents in accordance with the information

management principles of the present invention.

Detailed Description Text (4):
As illustrated in FIG. 1, the consumer-product information collection, transmission and delivery system of the present invention is generally indicated by reference numeral 1 and comprises an integration of information subsystems, namely: an IPI finding and serving subsystem 2 for allowing consumers to find product related information on the Internet (e.g. WWW) at particular Uniform Resource Locators (URLs), using UPC numbers and/or trademarks and tradenames symbolically-linked or related thereto; a UPC Product-Information Subsystem ("UPC Catalog") 3 for providing retailers with accurate up-to-date product information on numerous consumer-products offered for wholesale to retailers by manufacturers registering their products therewith; a Electronic Trading Information Subsystem 4 for providing trading partners (e.g. a manufacturer and a retailer) to sell and purchase consumer goods by sending and receiving documents (e.g. purchase orders, invoices, advance slip notices, etc.) to consummate purchase and sale transactions using either Value Added Network (VAN) based EDI transmission or Internet (e.g. HTTP, SMTP, etc.) based electronic document communications; a Sales Analysis and Forecasting Information Subsystem 5 for providing retailers with information about what products consumers are currently buying at retail stores or expect to be buying in the near future; Collaborative Replenishment Information Subsystem 6 for determining what products retailers can be buying in order to satisfy consumer demand at any given point in time; a Transportation and Logistics Information Subsystem 7 for providing retailers with information about when ordered products (purchased by retailers at wholesale) will be delivered to the retailer's stores; and Input/Output Port Connecting Subsystems 8 for interconnecting the input and output ports of the above-identified subsystems through the infrastructure of the Internet and various value-added EDI networks of global extent. Notably, unlike prior art supply chain management systems, the consumer-product information collection, transmission and delivery system of the present invention embraces the manufacturers, retailers, and consumers of UPC-encoded products, and not simply the manufacturers and retailers thereof. As will become apparent hereinafter, this important feature of the present invention allows manufacturers and retailers to deliver valuable product related information to the consumers of their products, thereby increasing consumer purchases, consumer satisfaction and consumer loyalty. Prior art supply chain management systems have no way or means of providing such information services to the consumers of UPC-encoded products along the consumer-product supply and demand chain.

Detailed Description Text (5):
As shown in FIGS. 2-1 and 2-2, the consumer-product information collection, transmission and delivery system of FIG. 1 is realized as an arrangement of system components, namely: a central UPN/URL Database Management Subsystem 9 for storing and serving various types of consumer-product information to retailers, manufacturers and consumers alike (e.g., the name of the product's manufacturer; the Universal Product Code (UPC) or European Article Number (EAN) assigned to the product by the manufacturer; one or more URLs specifying the location of information resources on the Internet at which particular kinds of information relating to the consumer-product can be found; merchandise classification; style number; tradename; information specifying the size, color and other relevant characteristics of the consumer-product, where applicable; ordering criteria; availability and booking dates, etc.); a globally-based (packet-switched) digital telecommunications network (such as the Internet) 10 having an infrastructure including Internet Service Providers (ISPs), Network Service Providers (NSPs), routers, telecommunication lines, channels, etc., for supporting packet-switched type digital datatelecommunications using the TCP/IP networking protocol well known in the art; one or more Internet Product Finding Directory (IPD) Servers, each indicated by reference numeral 11 and being connected to the Internet at strategically different locations via the Internet infrastructure 10 and data-synchronized with each other in order that each such Server maintains mirrored a

relational-type database structure as represented in FIGS. 4A and 4B; a plurality of Internet Product-Information (IPI) Servers, each indicated by reference numeral 12 and being connected to the Internet viathe Internet infrastructure; a plurality of retailer-related electronic-commerce (EC) information servers 12A, each operably connected to the infrastructure of the Internet, and enabling the hosting or one or more EC-enabled stores or EC-enabled on-line catalogues (i.e. EC-enabled WWW sites) owned, operated, managed and/or leased by one or more retailers along the retail supply and demand chain; a plurality of manufacturer-related electronic-commerce (EC) information servers 12B, each operably connected to the infrastructure of the Internet, and enabling the hosting or one or more EC-enabled stores or EC-enabled on-line catalogues (i.e. EC-enabled WWW sites) owned, operated, managed and/or leased by one or more manufacturers along the retail supply and demand chain; a plurality of User (or Client) Computers, each indicated by reference numeral 13, being connected to the Internet viathe Internet infrastructure and available to consumers (C.sub.1, C.sub.2, C.sub.3, . . . , C.sub.i); one or more data communication (i.e. EDI) networks 14, comprising data collection nodes 15 and communication links 16, operably connected to the centralized UPN/URL Database Management Subsystem 9, each Client Computer 13 available to a Manufacturer (M.sub.1, M.sub.2, M.sub.3, . . . , M.sub.j) and Retailer (R.sub.1, R.sub.2, R.sub.3, . . . , R.sub.k) within the retail supply and demand chain; a Web-based Document Server 30 connected to at least one of the IPD Servers 11 and the Internet infrastructure, for transferring documents and messages to remote Client Computer Systems during the registration of manufacturers and consumer products with the system hereof and periodically updating product-related information with the IPD Servers 11 in an automatic manner; and a Web-based Document Administration Computer 31 connected to the Web-based Document Server 30 by way of a TCP/IP connection 32, for administrating the registration of manufacturers and products with the system, initiating the transfer of consumer product related information (e.g. menu of URLs) between the remote Client Computer Systems and Web-Based Document Server 30, transferring such information to the IPD Servers 11, and maintaining local records of such information transfers and the like. As will become apparent hereinafter, Web-based Document Server 30 and Web-based Document Administration Computer 31 provide a subsystem for (i) managing the process of registering qualified manufacturers and their consumer products and related Web pages (e.g. UPC numbers and URLs), and (ii) updating the product-related information with the IPD Servers 11 in an automatic manner to ensure accurate links between UPNs and URLs within the UPN/URL Database Management Subsystem. The subsystem comprising the Web-based Document Server 30 and Web-based Document Administration Computer 31 shall be referred to as the Manufacturer/Product Registration Subsystem of the consumer product information finding and delivery subsystem 2 and indicated by reference numeral 33 throughout the figure drawings hereof.

Detailed Description Text (6):
Preferably, the centralized UPN/URL Database Management Subsystem 9 and at least one of the IPD Servers 11 are located at a secured information storage/processing center 17, along with a multiprocessor (or mainframe) computer system, information servers, routers, data communication lines, disk storage devices (e.g. RAIDs), tape drives and tape-library system, uninterrupted power supplies (UPS), and other peripheral technology to provide on-line, batch and back-up operations. However, the IPI Servers, the Client Computers and the other IPD Servers (if provided for database mirroring purposes), typically will be located throughout the world, as the distribution of manufacturers, retailers and consumers who are encouraged to use the system is scattered across the Planet.

Detailed Description Text (9):
In order to use the WebDox.TM. system, each remote Client Computer System 13 includes either a Windows 95 or Windows NT Computer system running WebDox Remoter software from Premenos Corporation of Concord, Calif. The Windows 95 or Windows NT computer system 13 can be realized using a suitable computer system having an Intel 486 or higher CPU, 16 MB of RAM or higher, and a VGA monitor or better, and running

(i) Microsoft Windows 95 or Windows NT 3.51 or higher Operating System (OS) software, and (ii) Microsoft Internet Explorer 3.0 or higher from Microsoft Corporation. Also, the WebDox Remote.TM. Server is provided with a dial-up Internet connection (i.e. 14,400 bps or better) to the Internet infrastructure. The function of the Web-based Document Server 30, Web-based Administration System 31 and remote client subsystems 13 running the Premenos.RTM. WebDox Remote.TM. software is to provide a Web-based Document Transport System for automatically transferring information (e.g. UPN/URLs) from manufacturers to the IPD Servers of the system in order to periodically update the same. While the illustrative embodiment of this Web-based Document Transport System has been described in terms of its implementation using the WebDox.TM. system from Premenos, it is understood that other commercially available electronic document transport systems (e.g. COMMERCE:FORMS.TM. Electronic Business Forms Package from Sterling Commerce, Inc., http://www.stercomm.com) can be used to carry out this subsystem. The operation of this Web-Based Document Transport System will be described in detail hereinafter with respect to the collection and delivery of consumer product-related information to the IPDs hereof.

Detailed Description Text (11):
In the illustrative embodiment of the present invention, the UPC Product-Information Subsystem 2 is realized using the UPN/URL Database Management Subsystem 9 and data communication networks 14 shown in FIGS. 2-1 and 2-2. Preferably, the product procurement services delivered by the UPN/URL Database Management Subsystem 9 are provided by modifying the prior art QRSolutions UPC Catalog currently implemented by QuickResponse Services, Inc., so that this subsystem includes the database structures (i.e. information fields and data elements) of the IPD Database Server 11 which are neither found in nor suggested by the prior art QRSolutions UPC Catalog. The structure and operation of the UPN/URL Database Management Subsystem and IPD Server of the present invention will be described in greater detail hereinafter. The information services supported by the UPC Product-Information Subsystem 3 include those provided by the prior art QRSolutions UPC Catalog, and also anumber of additional information services that can be used to carry out Product Registration within the IPI Finding and Serving Subsystem of the present invention. These additional information services will be described in greater detail hereinafter with reference to FIG. 2A.

Detailed Description Text (12):
The Electronic Trading Information Subsystem 4 is realized using the UPN/URL Database Management Subsystem 9, Client Computer Systems 13 and data communication networks 14 of the technology platform shown in FIGS. 2-1 and 2-2. Preferably, the inventory procurement services delivered by the Electronic Trading Subsystem 4 are provided by the prior art QRSolutions Econnect and Electronic Data Interchange Services currently being implemented by QuickResponse Services, Inc.

Detailed Description Text (16):
In the illustrative embodiment of the system of the present invention, each Client Computer Subsystem 13 has a conventional Java GUI-based web browser program (e.g. Netscape, Internet Explorer, Mosaic, etc.) with a plug-in type module, such as CyberFinder.TM. navigational software by Aladdin Systems, Inc., of Watsonville, Calif., that provides an on-screen graphical icon for a "IPI Web-site Find" function. An exemplary display screen 18 produced by such a Java GUI-based web browser program is set forth in FIG. 3B. Alternatively, the URL of the home page of the IPI Web-site can be recorded as a browser "bookmark" for easy recall and access through a conventional Java GUI-based Internet browser. Once at the home page of the IPI Web-site, an Internet user can find product-related information on the Internet in essentially the same way as when using the web browser program of FIG. 3B. As shown, the on-screen radio button 19 functions as an "IPI Web-site Find" Button (or Consumer Product Information Button) for instantly connecting the client subsystem to a particular IPI Web-site (i.e. hosted on each mirrored IPD Server) and especially adapted for carrying out the IPI finding and serving method of the

present invention. As will be described in greater detail hereinafter, examples of "IPI Web-sites" can include, but are not limited to: (1) one or more mirrored UPC Request Central Web-sites from which consumer product information from all manufacturers is available for access to consumers from predetermined Internet domains; and (2) an UPC Request Retail Web-site, for each retailer, wherein consumer product information associated with only manufacturers of products offered by the retailer is available for access to consumers from predetermined Internet domains within physical retail "brick and mortar" stores and "electronic commerce enabled stores.

Detailed Description Text (17):
In general, each IPI Web-site can be sponsored by a retail store subscribing to the consumer product information service hereof, or by one or manufacturers and/or service providers. The URL for the home page of any particular IPI Web-site can be selected with marketing considerations in mind, for example, "http://www.ipf.com" or "http://www.upcrequest.com" similar in form with the URLs of other information search-engines and directories currently available on the Internet. Upon selecting the IPI Web-site Find Button 19 (e.g. by a clicking of the mouse thereon shown in FIGS. 3B and 3C), the user is automatically connected to the home-page of the IPI Web-site (hosted on each mirrored IPD Server) which, as shown in FIGS. 3B and 3C, supports a Netscape-style "framework", within which web pages accessed through the IPI web-site are displayed. An excellent tutorial on "framing"entitled "The Netscape Frames Tutorial.TM. (2nd edition)" by Charlton D. Rose set forth at the URL: "http://www.newbie.net/frames/", last visited by Applicant on Mar. 26, 1997.

Detailed Description Text (19):
As shown in FIG. 3C, the first (top-most) display field, the sponsor frame 20A, can be used to display to the consumer, a Web page (e.g. HTML-encoded document) containing a message that the IPI Finding and Serving Subsystem is being delivered to the consumer by the IPI Provider under, for example, the sponsorship of either: (1) the hosting retailer; (2) one or more advertisers posting advertising "banners" in the display frame 20A; or (3) the consumer himself/herself by paying a subscription fee or the like. Understandably, the method of sponsorship employed will vary from embodiment to embodiment of the present invention. An exemplary message for this display screen might read, for example, as follows: "Welcome to the UPC Request.TM. Consumer Product-Information Finding and Serving System sponsored by THE HOME DEPOT for your shopping convenience and pleasure."

Detailed Description Text (21):
As shown in FIG. 3C, the second (left-most) display field, the control frame 20B, is used to display an HTML-encoded document containing a Java GUI-based "control panel" 21 for the consumer product information finding and serving subsystem of the present invention. In the illustrative embodiment, this control panel 21 includes six Check Box type buttons, namely: a first Check Box type button 21A which, when selected, automatically activates the Manufacturer/Product Registration Mode of the subsystem; a second Check Box type button 21B which, when selected, automatically activates the Manufacturer Website Search Mode of the subsystem; athird Check Box type button 21C which, when selected, automatically activates the UPN-Directed Information Access Mode of the subsystem; a fourth Check Box type button 21D which, when selected, automatically activates the Trademark-Directed Search Mode; a fifth Check Box type button 21E which, when selected, automatically activates the Product-Description Directed Search Mode of operation of the subsystem; and a sixth Check Box type button 21F which, when selected, automatically activates the UPC-Encoded-Applet-Download/Distribution Mode of operation of the subsystem. Each of these Check Box type buttons is hot-linked to a particular HTML-encoded document residing on the IPD Server(s) 11 of the subsystem hereof.

Detailed Description Text (27):
As shown in FIGS. 2B1 through 2B4, using presently known technology available for use on the WWW, there are at least four different ways of configuring IPD Server 11

and back-end UPN/URL Database Management Subsystem 9 of the illustrative embodiment. These four different subsystem architectures are schematically depicted in FIGS. 2B1 through 2B4.

Detailed Description Text (29):
In each of these four system architectures, the IPD Server 11 performs a number of basic functions, for example: (1) serving HTML-encoded documents associated with IPD Web-sites (e.g. UPC Request Central WWW site, UPC Request Retail WWW sites, etc.) to client subsystems 13 on the Internet so as to enable the six primary modes of operation of the consumer product information finding and delivery subsystem hereof including, but not limited to, access to consumer product related information stored within the IPI and Non-IPI Registrant Databases on the UPN/URL Database Management Subsystem 9; as well as (2) serving Libraries of executable files containing "UPN-enabled Java Applet tags" for client-side Applets as well as server-side Applets a/k/a "Serviets", so as to enable retailers, manufacturers, advertisers, et al to download the executable "Applet tag containing" file to client subsystems.

Detailed Description Text (30):
According the first system architecture shown in FIG. 2B1, the UPN/URL Database management Subsystem 9 is realized by a SQL-based RDBMS server 9, whereas the IPD server 11 is realized by a Java Web Server 11', provided with Java servlet support, and operably connected to the RDBMS server 9 by way of high-speed digital transmission link known in the art. During system operation, the Java Web Server 11' serves to a Java-enabled client subsystem 13, an HTML-encoded document containing a serviet HTML tag <SERVLET> which, upon selection by a single mouse-clicking operation by the consumer, sends an http request to the Java Web Server 11', invoking a prespecified UPN-encoded servlet stored therewithin, causing the CPIR-enabling servlet to execute on the server-side of the network. This causes the servlet to call and run certain predefined Java methods which carry out a UPN-specified CPI search on the RDBMS server 9 and return the search results to the client subsystem 13 for display within a predetermined GUI generated therewithin. Using this system architecture, each UPN-encoded servlet executed within the Java Web Server 11' will contain information relating to (1) the UPN-specified consumer product on which product information is to be searched for within the RDBMS server 9, (2) licensing information relating to whom the CPIR-enabling servlet has been licensed (although this architecture does not enable easy enforcement of the granted license as the servlet is executed on the server side of the network.

Detailed Description Text (31):
According to the second system architecture shown in FIG. 2B2, the UPN/URL Database management subsystem 9 is realized by a SQL-based RDBMS server 9, whereas the IPD server 11 is realized by a Java Web Server 11", providing Java Applet support and being operably connected to the RDBMS Server 9 by a high-speed digital datatransmission link known in the art. During system operation, the Java Web Server 11" serves to the Java-enabled client subsystem 13, an HTML-encoded document containing a "UPN-encoded" Applet HTML tag <APPLET>which, upon selection by a single mouse-clicking operation by the consumer, causes the CPIR-enabling Applet to execute on the client-side of the network, sending an http request to the Java Web Server 11", invoking a prespecified Common Gateway Interface (CGI) stored within the Java Web Server 11". This causes the Applet to call and CGI to run certain predefined methods for carrying out a UPN-specified CPI search on the RDBMS server 9 and returning the search results to the client subsystem 13 for display within a predetermined GUI prespecified within the Applet. Using this system architecture, each UPN-encoded Applet executed within the Java browser of the client machine 13 will contain information relating to (1) the UPN-specified consumer product on which product information is to be searched for within the RDBMS serverm 9, (2) licensing information relating to whom the client-side Applet has been licensed and by whom the Applet may be served within the terms of the licensing program, etc.

Detailed Description Text (32):
According to the third system architecture shown in FIG. 2B3, the UPN/URL Database Management Subsystem 9 is realized by a SQL-based RDBMS server 9, whereas the IPD server 11 is realized by a Java Web Server 11'", providing client-side Applet support, and being operably connected to the RDBMS server 9 by way of a high-speed digital datatransmission link known in the art. During system operation, the Java Web Server 11'" serves to the Java-enabled client subsystem 13, an HTML-encoded document containing a UPN-encoded Applet HTML tag <APPLET> which, upon selection by a single-mouse clicking operation by the consumer, causes the Applet to execute on the client-side of the network, creating a "socket-type" connection at lower (TCP/IP) communication layers between the client subsystem 13 and Java Web Server 11'", enabling the Java Web Server 11'" to run certain predefined Java methods for carrying out a UPN-specified CPI search on the RDBMS server 9, and returning the search results to the client subsystem 13 for display within a GUI prespecified within the Applet. Using this system architecture, each UPN-encoded Applet executed within the Java client subsystem 13 will be created to contain information relating to (i) the UPN-specified consumer product on which product information is to be searched for within the RDBMS server 9, (ii) licensing information relating to whom the client-side Applet has been licensed and by whom the Applet may be served within the terms of the licensing program, etc.

Detailed Description Text (33):
According to the fourth system architecture shown in FIG. 2B4, the UPN/URL Database Management Subsystem 9 is realized by a SQL-based RDBMS server 9, whereas the IPD Server 11 is realized by a Java Web Server 11"", supporting client-side Applet execution and being operably connected to a high-speed digital data communication link well known in the art. During system operation the Java Web Server 11"" serves to the Java-enabled client subsystem 13, an HTML-encoded document containing a Applet HTML tag <APPLET> which, upon selection by a single mouse-clicking operation by the consumer, causes the CPIR-enabling Applet to execute within the Java-enabled client 13 on the client-side of the network, calling a Remote Invocation Method to carry out a prespecified CPI search on the RDBMS server 9 and returning the search results to the client subsystem 13 for display within a predetermined GUI prespecified by the Applet. Using this system architecture, each UPN-encoded Applet executing within the Java enabled client 13 will contain information relating to (1) the UPN-specified consumer product on which product information is to be searched for within the RDBMS server, (2) licensing information relating to whom the server-side Applet has been licensed and by whom the Applet may be served within the terms of the licensing program, etc.

Detailed Description Text (41):
Typically, each client subsystem 13 will be maintained by either present or future manufacturers, retailers and/or consumers of products, about which information can be found on the Internet. As shown in FIG. 3A1, any client subsystem of the present invention may be realized as a desktop computer workstation comprising: a processor and memory 19; a visual display monitor 20; a keyboard 21 ; a JAVA GUI mouse 22; and a bar code symbol reader 23 for reading UPC, UPC/EAN and other types of bar code symbols printed on consumer products, brochures, documents, and the like.

Detailed Description Text (42):
As shown in FIG. 3A2, any Client Computer 13 may also be realized in the form of a Web-based (wired or wireless) multi-media kiosk, designed for use as a "Cyber sales agent" within retail shopping environments. As shown in FIG. 3A2, the Web-based kiosk of the present invention may comprise: a floor, wall or ceiling supported housing 25; an omnidirectional laser bar code symbol reader (e.g. Metrologic MS 6720 Laser Scanner) 26 for reading UPC (and other types of) symbols printed on products, brochures, documents and the like; an active-matrix LCD-type visual display screen 27 for viewing product related information automatically displayed thereon in response to the entry of the UPC numbers scanned into the UPC Number Entry Window 21D below the IPI Finder button 21A of Control Strip 20B displayed on

the client subsystem, as shown in FIG. 3C; atop touch-screen type keyboard and pointing device 28 for clicking on anchored links on Web pages, entering information into client subsystem during its use; audio-speakers 29A for supporting multimedia Web-sites that may be visited when using the client subsystem; a color or black/white printer for printer 29B for printing out Web pages under consumer command during an information finding session using the system; and also, one or more floppy-disc (or otherwise removable) drive units 29C, accessible to the consumer for recording promotional and trial versions of information-based consumer products (e.g. video and audio recordings, computer software products, and the like) on removable information storage media (e.g. 1.44 MB floppy discs, 100 MB Zip.RTM. floppy discs, IGB Jazz.RTM. floppy discs, etc.) supplied by either the retailer or consumer. Optionally, the kiosk can be provided with a stereoscopic micropolarizing LCD panel from Vrex, Inc. of Elmsford, N.Y. so that micropolarized spatially-multiplexed images (SMIs) of 3-D objects represented with VRML-encoded Web pages can be stereoscopically perceived by consumers when viewed through either an electrically-passive polarizing visor structure supported from the housing of the kiosk, or a pair of polarizing eyeglasses tethered to the kiosk housing and donned by the consumer. Notably, by virtue of its compact size and low power requirements, this Web-based kiosk can be easily located in supermarkets, department stores, superstores, home-centers, discount retail outlets, or any other public location where consumer-products are being sold, offered for sale, and/or serviced.

Detailed Description Text (43):
As shown in FIG. 3A3, any Client Computer 13 within the system hereof may be realized in the form of the Web-based multi-media kiosk 34, also designed for use as a "virtual sales agent" within retail shopping environments. As shown, the Web-based kiosk 34 comprises: an ultra-compact housing 35 capable of being supported upon a pair of support rods (35A), a vertical support surface (e.g. wall), a horizontal support surface (e.g. countertop), or supported from a ceiling or pedestal; an omnidirectional laser bar code symbol reader (e.g. Metrologic MS 6720 Laser Scanner) 36, modified with handle 36A, for reading UPC (and other types of) symbols printed on products, brochures, documents and the like; an active-matrix LCD-type visual display screen 37 for viewing product related information automatically displayed thereon in response to the entry of the UPC numbers scanned into the UPC Number Entry Window 21D displayed on the client subsystem; a touch-screen type keyboard and pointing device 38 for clicking on anchored links on Web pages, entering information into client subsystem during its use; audio-speakers 39A for supporting multimedia Web-site that may be visited when using the client subsystem; a color or black/white printer for printer 39B for printing out Web pages under consumer command during an information finding session using the system; a scanner support stand 40 with Java GUIde flanges 41A and 41B, for Java GUIdably receiving and supporting the scanner 36 as shown in FIG. 3A3; a recoilable scanner cable 42, dispensed from cable cartridge 43 and Java GUIded through hole 44 in a scanner support bridge 40; atelephone handset 45 and associated communication apparatus for making telephone calls over a public telecommunications switching network (PSTN) independent of the operation of the Web-browser of the kiosk; and a mag-stripe card reader 46 and associated credit transaction terminal for automatically dialing up consumer credit and like databases over the PSTN (or Internet) upon scanning mag-stripe card 47 through reader 46. Optionally, the kiosk may also include one or more floppy-disc (or otherwise removable) drive units (not shown) accessible to the consumer for recording promotional and trial versions of information-based consumer products (e.g. video an audio recordings, computer software products, and the like) on removable information storage media (e.g. 1.44 MB floppy discs, 100 MB Zip.RTM. floppy discs, IGB Jazz.RTM. floppy discs, etc.) supplied by either the retailer or a consumer. Also, the kiosk can be provided with a stereoscopic micropolarizing LCD panel from VRex, Inc. of Elmsford, N.Y. so that micropolarized spatially-multiplexed images (SMIs) of 3-D objects represented with VRML-encoded Web pages can be stereoscopically perceived by consumers when viewed through either an electrically-passive polarizing visor structure supported from the housing of the kiosk, or a pair of polarizing eyeglasses tethered to the kiosk

housing and donned by the consumer. Notably, by virtue of its compact size and low power requirements, this Web-based kiosk can be easily located in supermarkets, department stores, superstores, home-centers, discount retail outlets, or any other public location where consumer-products are being sold, offered for sale, and/or serviced.

Detailed Description Text (44):
As shown in FIG. 3A3, the bar code symbol reader is supported within its support stand/bridge 40. In this configuration, the laser scanning field of the reader is projected downwardly upon the surface of the LCD touch screen display panel. By virtue of the angle of tilt of the display panel 37 relative to the ground surface of the retail store, and the projection angle of the laser scanning field relative to the display panel surface, the consumer will be able to easy read the bar code symbol on most consumer products by simply presenting the bar code symbol to the scanning window. In the event that the product is too large to lift from the floor to the scanning window, the consumer can simply remove the bar code symbol reader 36 from its support stand 40, as shown in FIG. 3A3, by pulling cord 42 out of its take-up compartment 43 so that the reader is positioned to read the bar code symbol 49 on the retail consumer product 48. When symbol scanning is completed, the bar code symbol reader is lifted back into its stand support position, between support Java GUIdes 41A and 41B, while the cord 42 is automatically recoiled back into storage compartment 43, as shown in FIG. 3A3. While the consumer uses the kiosk to scan UPC (or UPC/EAN) symbols on products, to find, access and display consumer product-related information on the display panel 37, he or she may choose or need to use telephone 45 to speak with a manufacturer's representative and engage in electronic commerce, and/or use the magstripe card reader 46 to read magstripe cards (e.g. credit cards) to pay for consumer purchases made over the Internet using the kiosk of the present invention.

Detailed Description Text (47):
As shown in FIG. 3A5, a client subsystem 13 hereof is realized as consumer product information access terminal 60 comprising: a POS station 61 having a cash register computer 61A and keyboard 61B, and a price/UPC Database 61C containing price and UPC number information tables; a Web-enabled computer terminal 62 connecting the POS station 61 to the Internet infrastructure 10 through an ISP 10A; a bar code symbol reader 63 connected to the POS station 61; a 15' diagonal active-matrix LCD panel 64, operably connected to the output of the Web-enabled computer system 62 and the output of the cash register computer 61A, and having a swivel-base 65 that allows the LCD panel to be oriented in various viewing positions for displaying consumer product-related information accessed from the IPI Registrant Database shown in FIGS. 4A1 and 4A2, as well as price information accessed from the price/UPC database 61C. The advantage of this client computer subsystem is that it enables a retail sales clerk to check out customer purchases in a conventional manner, and conveniently access the IPI Finding and Serving Subsystem when check-out business is relatively slow, to answer any questions that consumers may have regarding a particular product in the retail store. This system will be ideal in retail environments having a high level of customer service and large retail service staff. In such instances, the IPI Finding and Serving Subsystem hereof empowers retail sales clerks, at the POS counters as well as customer service counters, by enabling them to quickly access any item of product related information linked to products in their stores by manufacturers and their agents.

Detailed Description Text (51):
For example, as shown in FIG. 3A8, the client computer subsystem 13 can be realized as atransportable hand-held computer, such as the Newton.RTM. Model 130 Messagepad 70 from Apple Computer, Inc. of Cupertino, Calif., provided with NetHopper.TM. brand Internet Access (http-client) Software which supports the TCP/IP networking protocol within the Newton MessagePad operating system, as well as the client-side of http, as taught in U.S. Pat. No. 5,905,251 incorporated herein by reference. Notably, the NetHopper.TM. brand Internet Access (http-client) Software 71 provides

the Newton Model 130 Messagepad with an integrated JAVA GUI-based web browser program for WWW access in a manner know in the Internet access art. As shown in FIG. 3A8, the Newton Messagepad has a display panel 72, touch-screen type keypad 73, and programmed laser scanning bar code symbol reader 74 (e.g., Metrologic ScanQuest.RTM. Laser Scanning Module Model No. IS4120), integrated within the hand-held device as described in U.S. Pat. No. 5,905,251. The function of bar code symbol scanner 74 is to read UPC or UPC/EAN symbols on consumer products and to produce symbol character data representative of the numbers encoded within such standardized bar code structures. The Newton Messagepad Model 130, denoted by reference numeral 70, is also equipped with a Motorola PCMCIA-based modem card 75 having a RF transceiver for establishing a wireless digital communication link with either a cellular base station or one or more satellite-base stations 76 connected to the Internet by way of an ISP or NSP 10A in a manner well known in the global information networking art. As such, a first wireless digital communication link 77 is established between the Newton Messagepad 130 and cellular (or satellite) base stations 76, and a second digital communications link 78 is established between the base station 76 and the ISP or NSP associated with the infrastructure of the Internet. Accordingly, this embodiment of the client computer subsystem of the present invention is completely mobile (i.e. transportable and provide the consumer access to the Internet and all of its information resources on the WWW and elsewhere, provided that the device maintains its wireless digital communication link with base station 76, distributed through the globe, making access to the IPD servers hereof possible at home, in the office, within retail stores, as well as on the road wherever that may be.

Detailed Description Text (52):
As shown in FIG. 3A8, the Newton MessagePad, ScanQuest.RTM. Laser Scanning Module 74 and auxiliary battery supply (not shown) are completely housed within a rubberized shock-proof housing 79, in order to provide a hand-supportable unitary device 70 of rugged construction. This hand-held Internet-enabled wireless information access terminal can be used virtually anywhere, provided wireless Internet access is enabled by digital IP communication network service providers (NSPs) in operation about the planet. Operation of Internet access terminal 70 is quite simple from the user's point of view. Upon reading a bar code symbol 80 on a consumer product 81, the object detection field 82 of the device automatically detects the consumer product, and in response thereto, a laser beam 83 is automatically projected and swept across the UPC symbol 80 thereon. While it is generally preferred that the automatic laser scanning engine 74 be interfaced with I/O communications port of the Newton MessagePad device 70, it is understood that, in some instances, it may be desired to connect a pen or wand-type scanning device to the serial port thereof to provide bar code symbol reading capabilities thereto. Optionally, bar code decoding software can be run on the Message Pad device, or as firmware contained within the scanning engine 74 in a manner known in the art.

Detailed Description Text (55):
For example, when visiting particular EC-oriented (i.e. electronic-commerce enabled) Web-sites, a consumer may scan UPC (and/or UPC/EAN) numbers on products within his or her home (e.g. in the pantry) using any one of the client computer subsystems hereof equipped with a bar code symbol Reader in order to remotely purchase such consumer products using credit or debit type financing, and direct shipment of purchased products to the consumer's home or elsewhere by a particular delivery service. Such EC-enabled WWW sites, commonly referred to as electronic-commerce (EC) stores or storefronts, as well as on-line electronic commerce catalogues, can be operated by manufacturers, wholesalers and/or retailers of consumer products, as indicated in FIGS. 2-1 and 2-2. As shown therein, retailer operated, managed and/or owned EC stores (i.e. EC-enabled WWW sites) are hosted on retailer operated/owned EC information servers (MECIS) 12B, whereas manufacturer operated, managed and/or owned EC stores (i.e. EC-enabled WWW sites) are hosted on manufacturer operated/owned EC information servers (MECIS) 12B operably connected to the infrastructure of the Internet.

Detailed Description Text (59):
As shown in FIG. 4A1, the relational-type IPI Registrant Database maintained by each IPD Server comprises a plurality of labeled information fields for each product "registered" therewith, namely: an IPN Information Field for storing information (e.g. numeric or alphanumeric string) representative of the Universal Product Number (e.g. twelve-digit UPC Version A number, eight-digit UPC Version E number, thirteen-digit UPC/EAN number, or twelve-digit UPC Version A number plus five-digit Add-On Code Segment number frequently used in the publishing industry) assigned to the consumer product; a Company Name Information Field for storing information (e.g. numeric or alphanumeric string) representative of the name of the company making, selling or distributing the corresponding product; a URL Information Field(s) for storing information (e.g. numeric or alphanumeric string) representative of the Universal Resource Locator (URL) or Universal Resource Locators (URLs) at which information resource(s) of the multimediatype can be found on the Internet relating to the corresponding consumer product; a Trademark Information Field for storing information (e.g. text and/or alphanumeric strings) representative of each trademark (or Domain Name) used in connection with the promotion, sale, distribution and/or use of the corresponding product, and preferably registered with the United States Patent and Trademark Office (USPTO) or other governmental or quasi-governmental agency (e.g. INTERNIC or Network Solutions, Inc.); a Product Description Information Field for storing information (e.g. text strings) descriptive of the corresponding product; an E-mail Address Information Field for storing information (e.g. numeric or alphanumeric string) representative of the e-mail address of the corresponding company (e.g. manufacturer) on the Internet; a CPIR-Enabling Applet Information Field for storing information representative of consumer product information request (CPIR) enabling Applets accessible by retailers, wholesalers, advertisers, Web publishers and the like by downloading operations to be described in detail hereinafter, and eventually inserted within the HTML code of Web documents on various types of Internet information servers used to host WWW sites of all sorts, so that, when executed, these CPIR-enabling Applets automatically access from the master UPN/URL Database Management Subsystem 9 hereof, a categorized menu of URLs specifying the location of information resources on the Internet pertaining to a particular UPN-labeled product and symbolically linked thereto by its manufacturer or authorized agent; image file storage field for storing color images of consumer products registered with the system; and a Status Information Field for storing information (e.g. numeric or alphanumeric string) representative of whether the company (e.g. manufacturer) associated registered product has paid their monthly, quarterly or annual registration fees associated with registration within the IPD Servers of the information finding and serving subsystem hereof. Notably, each information item contained with the information field shown along the same horizontal line of FIG. 4A1 is related or linked.

Detailed Description Text (60):
In general, the URL stored in the URL Information Field specifies the address of an information resource on the Internet (e.g. Web), and thus may point to any one of the following types of information resources: a HTML document or file on the World Wide Web (expressed in the HyperText Markup Language); a single record in a database; the front-end of an Internet program such as Gopher; or the results of a query made using another program. In accordance with convention, the syntactic structure of each URL generally comprises: a Protocol Specifier, such as "http", "ftp", "gopher", "news", or "mail to", and specifies the type of resource that the URL is pointing (i.e. connecting) to; a Host Indicator, represented by double slashes "//" if the URL is requesting information from a Web Server; Server Name comprising an Internet Domain Name (e.g. "www."), the address of the Web Server (e.g. "ibm." and a designator (e.g. "com", "edu", "int", "mil", "net", "org", etc.) identifying who owns the server or where it is located; a Path Name, such as "Products/Computers/", indicating a path to the destination information file on the identified Server; and a Resource Name (including file extension, e.g. ".html"),

such as "aptiva.html", identifying the actual [redacted]ed information file that contains actual information resource specified by the URL.

Detailed Description Text (62):
Notably, each information item contained within the information field shown along the same horizontal line of FIG. 4A1 is symbolically related or linked. Different products of the same registrant or related registrant m a y also be linked together so that a user looking for information about a particular product is automatically provided with URLs which are assigned to related products of the registrant which may satisfy the goals or objectives of a particular advertising and/or marketing campaign or product promotion program of the registrant company. As it may be desired to relate particular products at particular points in time, the relationships therebetween can be dynamically changed within the IPI Registrant Database by a straightforward database updating operation carried out by a system administrator (or manager) who, in theory, can be located virtually anywhere throughout the world. Expectedly, such database updating operations would be carried out using appropriate system access and security procedures well known in the art.

Detailed Description Text (63):
Inasmuch as the UPC data structure is presently employed as a universal product identifier (i.e. a primary data structure) in a majority of industries throughout the world, its twelve-digit numeric string (for UPC Version A) or eight-digit numeric string (for UPC Version E) will be a preferred UPN (in many applications) for purposes of carrying out the principles of the present invention. This twelve (12) digit human-readable number, printed on the bottom of each UPC label (and encoded within the bars and spaces of the UPC label itself), comprises: (i) a six digit manufacturer number assigned to the manufacturer by the Uniform Code Council, Inc. (UCC) of Dayton, Ohio, and consisting of a one digit "number system" number and a five digit manufacturer code; (ii) a five digit "product" number assigned to the product by the manufacturer; and (iii) a one digit modulo check digit (mathematically calculated) and added to each UPC number to check that the code has been read correctly by the bar code symbol reader.

Detailed Description Text (64):
In order to provide the requester greater control over what information is actually displayed on its client subsystem, the URL Information Field of the IPI Database shown in FIG. 4AI contains anumber of information subfields. As shown in FIG. 4A2, these information subfields comprise: a Product Advertisement Information Field for storing information representative of URLs pointing to information on the Internet relating to advertising and/or promotion of the product; a Product Specification (i.e. Description) Information Field for storing information representative of URLs pointing to information on the Internet relating to specifications on the product; a Product Update Information Field for storing information representative of URLs pointing to information on the Internet relating to product updates, recalls, notices, etc; a Product Distributor (e.g. Wholesaler and/or Resaler) Information Field for storing information representative of URLs pointing to information on the Internet relating to distribution, sale and/or ordering of the product; a Product Warranty/Servicing Information Field for storing information representative of URLs pointing to information on the Internet relating to warranty, extended warranty offerings, servicing and maintenance of the product; a Product Incentive Information Field (e.g. rebates, discounts and/or coupons) for storing information representative of URLs pointing to information on the Internet relating to rebates, discounts and sales on the product; a Product Review Information Field for storing information representative of URLs pointing to information on the Internet relating to reviews, analysis, testing, inspection and/or comparison of the product; and Miscellaneous Information Field(s) for storing information representative of URLs pointing to information on the Internet relating to miscellaneous aspects of the product (e.g., direct product sales on the WWW, product installation/set-up and operating manuals, company reports (10Ks, annual reports, etc.), and the like. Each

URL symbolically linked to a UPC-labeled product registered in the Registered IPI Database is categorized within one or more of these URL categories.

Detailed Description Text (65):
The list of URLs recordable in the IPI Registrant Database for each registered UPC-labeled product is virtually unlimited. Below are just a few examples of how the IPI Finding and Serving Subsystem hereof can be used as a virtual sales agent that provides value-added services to consumers, retailers and the like.

Detailed Description Text (66):
For each CD sound recording, the URL list may contain a URL that points to a promotional QuickTime.RTM. video recording or MP3-formatted sound recording published on the WWW for reviewing and evaluation by the consumer. The promotional song can be by a commissioned or endorsing artist, as is typically done in conventional advertising programs. The same can be done for video recordings on tape and digital video discs (DVDs). The URL may also provide the consumer with a down-loadable trial version of the product for a limited time period.

Detailed Description Text (67):
For each computer software product, the URL list may contain a URL that points to a multi-media clip on the WWW that provides a demonstration of the solutions that the software product provides, as well as the functions and development tools that it enables. It may also provide the consumer with a down-loadable version of the software product for atime-limited trial period.

Detailed Description Text (68):
For electronic consumer products, the URL list may contain a URL that points to a multi-media clip on the WWW that provides an audio-visual demonstration of the product in various user environments. Also, the URL can contain a URL that points to a Web-based Specification Sheet that can be printed out in a retail environment, at home, work or on the road.

Detailed Description Text (69):
For groceries and like articles, the URL list may contain a URL that points to a multi-media clip on the WWW that provides a QuickTime.RTM. video recording or the like of the product, illustrating various cooking recipes and uses for the product. Also, the URL list can contain a URL that points to a Web-based Discount Coupon that can printed out in the store, at home or work.

Detailed Description Text (70):
For toys, the URL list may contain a URL that points to a multi-media clip on the WWW that provides an audio-visual demonstration of the toy along with promotional endorsements by the various characters used in its advertising campaign.

Detailed Description Text (71):
For clothing, garments, or accessories (e.g. wearing apparel), the URL list may contain a URL that points to a multi-media clip on the WWW that provides a QuickTime.RTM. video recording or the like of the clothing, garments, and/or accessories being modeled by stunning fashion models. Ideally, such video recordings, linked to particular articles of wearing apparel by their UPC number, can be used to extend and augment the advertising campaign being carried out in other forms of media (e.g. television, radio, print, billboards, etc.).

Detailed Description Text (72):
Preferably, the manufacturer, its marketing personnel and advertising agents will actively participate in the creation of the product related information resources, as well as the placement of their URLs into the above-defined (or like) URL categories maintained within the Database of the IPI Finding and Serving Subsystem hereof. Also, using the Manufacturer/Product Registration Subsystem hereof, manufacturers and/or their agents can easily link their UPNs (e.g. UPC and/or EANs)

with such URLs and manage the same in a dynamic manner to ensure that product related information on the Internet is accurately linked to the UPNs of the manufacturer's products. Through such active participation, the business objectives of any particular manufacturer or retailer can be promoted by way of the IPI Finding and Serving Subsystem of the present invention. In this way, the information requesting consumer is provided with only the kinds of product-related information which he or she seeks.

Detailed Description Text (73):
As shown in FIG. 4B, the Non-IPI Registrant Database maintained by each IPD Server comprises a plurality of labeled information fields for each product that is not currently registered with the IPD Server, namely: an IPSN (i.e. IPN) information Field for storing information (e.g. numeric or alphanumeric string) representative of the Universal Product Number (e.g. a UPC number from a UPC numbering system, or an EAN numbering system) assigned to the non-registered product; a Company Name Information Field for storing information (e.g. numeric or alphanumeric string) representative of the name of the company making, selling or distributing the corresponding non-registered product; a Trademark Information Field for storing information (e.g. text and/or alphanumeric strings) representative of each trademark used in connection the promotion, sale, distribution and/or use of the corresponding product, and preferably registered with the USPTO or other governmental agency; a Product Description Information Field for storing information (e.g. text strings) descriptive of the corresponding product; and an E-mail Address Information Field for storing information (e.g. numeric or alphanumeric string) representative of the e-mail address of the corresponding company (e.g. manufacturer) on the Internet; a Status Information Field for storing information (e.g. numeric or alphanumeric string) representative of whether the company associated non-registered product has been solicited by the IPD Server, and on what dates registration solicitation has occurred. Notably, each information item contained with the information field shown along the same horizontal line of FIG. 4A1 is related or linked. The information required to construct the Non-IPI Registrant Database shown in FIG. 4B can be readily obtained from anumber of commercially or publicly available information sources (e.g., the Universal Code Council, Inc., Dayton, Ohio; QRS, Inc. Of Richmond. Calif.; General Electric Information Services (GEIS) of Delaware, Md.; etc.).

Detailed Description Text (76):
According to a first database construction technique, the administrator of the IPI Registrant Database would transmit Product Registration Requests (PRRs) in the form of electronic documents to each and every the manufacturer having been issued, for example, a six digit UPC Manufacturer Identification Number (MIN) by the UCC, Inc. Such electronic documents can be transmitted using conventional MIME protocols such as, for example, STMP. The Product Registration Request document would seek to ascertain from the manufacturers the various information items (including the menu of URLs) identified in the IPI Registrant Database of FIG. 4A1. In response to the Product Registration Request, each solicited manufacturer would send back to the administrator of the IPI Registrant Database (for each of its consumer products) its UPC number and a menu of categorized URLs indicating the location of the information resources identified in the Product Registration Request document. This information can then be used to readily construct the IPI Registrant Database of the illustrative embodiment.

Detailed Description Text (77):
According to a second database construction technique, a global advertising campaign would launched (over various media) in order to solicit the various information elements identified in the IPI Registrant Database of FIG. 4A1 and thus register the products of the manufacturers selling UPC-labeled products. Preferably, such information would be collected by way of an electronic datatransfer subsystem(s) set-up to cooperate with the system of the present invention in order to facilitate database construction operations.

Detailed Description Text (80):
Once an "initial" IPI Registrant Database has been constructed using any one or more of the four database construction techniques described hereinabove, manufacturers registered therewith can be periodically contacted using Web-based electronic document (i.e. message) transfer techniques in order to request updating and confirmation of the UPN/URL listings contained within the database of the IPI subsystem of the present invention.

Detailed Description Text (81):
According to a fifth database and preferred construction technique of the present invention, the Registrant IPI Database of the system would be initially "seeded" with several items of information obtained and related without the assistance of manufacturers of UPC-labeled products. Such information items include: (1) the six digit UPC Manufacturer Identification Numbers encoded in the UPC symbols (and numbers) applied to the products of such UCC-registered manufacturers; and (2) the URLs of the Web home pages of such manufacturers.

Detailed Description Text (82):
The first step of this database construction method involves obtaining the six digit Manufacturer Identification Numbers (MINs) uniquely issued to manufacturers by the Uniform Code Council, Inc. of Dayton, Ohio. Such MINs can be obtained from various commercial sources including GE Information Services, QRS, Inc. formerly Quick Response Services, Inc.), as well as the UCC. At present, about 180,000 Manufacturers Identification Numbers have been issued to manufacturers by the UCC. A string of six zeros (i.e. 000000) may be added to each one of these 180,000 or so six digit Manufacturer Identification Numbers in order to produce 180,000 or so 12 digit numbers (i.e. hereinafter referred to as "Manufacturer's Reference Numbers) for the 180,000 or so manufacturers listed in the IPI Registrant Database under construction. As each such Manufacturer Reference Number has the same length as a UPC number of its manufacturer, this number can be conveniently thought of as the "Manufacturer Reference UPC Number" which can be stored in the UPN Information Field of the Database along with the corresponding manufacturers name being stored in the Company Name Information Field.

Detailed Description Text (83):
The second step of the method involves finding the URL of the Web home page of each of the 180,000 manufacturers who have been assigned a Manufacturers Identification Code and are listed in the Database. Such URL information can be found using anumber of available techniques: (i) using a commercially available search engine to search the WWW in order to find the URL of the home page of each manufacturer's Web-site, if it has one, using the name and address thereof obtained during the first step above; or (ii) using a commercially available (INTERNIC-enabled) Domain Name search service that uses the names and addresses of the manufacturers (obtained during the first step above) in order to determine whether a particular manufacturer has a registered domain name on the Internet, and if so, is the domain name being actively used in a URL that points to the home page of the manufacturer's Web-site. Once obtained, such URLs are then added to the IPI Database, along with the e-mail and/or other address of the manufacturer symbolically linked thereto (if available).

Detailed Description Text (84):
Having constructed the "seeded" Database, it can then be used to connect the client subsystem of users to the home page of Web-sites of manufacturers of particular products. Initially, when an Internet user provides the UPC number of a particular product as input to the Input Box of the HTML form displayed in the information display frame of the client subsystem (e.g. when operated in its Manufacturer Website Search Mode), then the IPD Server need only compare the first six digits of the entered UPC number against the first six-digits of the Manufacturer Reference UPC Numbers (i.e. Manufacture Identification Numbers) listed in the "seeded"

Database. The corresponding (home-page) URL of the matching manufacturer is returned to the client subsystem Ca for display. In instances of an initially seeded Database, in which only the "Manufacturer Reference UPC Numbers" are listed therein, the requesting client subsystems are provided with the URLs of the home pages of the symbolically linked manufacturers. Then as manufacturers begin to register their consumer products with the system (e.g. in response to mass e-mailings, advertisements and/or marketing and promotional efforts, etc.), the IPD Database will return a menu of "hot-linked" URLs, for each registered product, pointing to various types of product-related information resources on the Internet (described above) that can be easily accessed by simply clicking thereon in a conventional manner. Over time, Manufacturer Reference UPC Numbers and the URLs of the "home pages" of such manufacturers will become replaced by the UPC numbers of registered products and the menu of URLs on the WWW symbolically linked thereto by the manufacturers, thereby allowing consumers and users of the system to precisely pinpoint consumer product-related information on the WWW which has been specified by the manufacturer, its marketing department and/or advertising agency. With manufacturer's and advertiser's participation and feedback, the initially seeded RDBMS described hereinabove will quickly grow into a robust RDBMS richly filled with the various information items described in FIGS. 4A1 and 4A2, including the symbolically linked UPCs and URLs that point to very specific consumer product related information resources (i.e. files) stored within IPI Servers of the system located across the global expanse of the Internet.

Detailed Description Text (85):
According to a sixth database construction technique of the present invention, the Registrant IPI Database of the system would be constructed by allowing each manufacturer to construct a limited or restricted version of the master UPN/URL Database (i.e. Registrant IPI Database) of the system, wherein only UPC-encoded products of the registered manufacturer and Web-based information items related thereto are entered into the database. As will be described in greater detail herebelow in connection with the third method of Product Registration in the subsystem hereof, the creation of such limited-version UPN/URL databases can be carried out by providing each registered manufacturer with a computer program that allows its administrators to construct and manage a limited UPN/URL database in a "turn-key" manner. Also, from its Website, the manufacturer can serve the limited UPN/URL database over the Internet to consumers. As part of the registration process, each registered manufacturer transmits its limited UPN/URL database to Web-server 30 which then integrates all such databases in order to update the master UPN/URL database (IPI Registrant Database) of the system.

Detailed Description Text (87):
In general, for each system architecture shown in FIGS. 2B1 through 2B4, there will be a different Applet-driven method used to access consumer product related information (e.g. UPN/URL links) from the RDBMS server 9 and display the search results within a Java-based GUI at the point of presence of the consumer using a Java-enabled client machine 13. In order to practice these different methods, it will necessary construct either server-side or client-side UPN-encoded CPIR-enabling Applets, distribute the HTML tags associated therewith to remote client subsystems, and thereafter embed these CPIR-enabling Applet tags within HTML-encoded documents for publishing over the Internet. Such CPIR-enabling Applet construction, distribution and embedding methods will now be described in detail hereinbelow.

Detailed Description Text (88):
The First Applet-driven Method of Accessing and Displaying Categorzed UPN/URL Link Menus From the UPN/URL Database Management Subsystem the Present Invention

Detailed Description Text (90):
In general, the method of FIGS. 4E1 and 4E2 involves using a server-side CPIR-enabling Applet to automatically conduct a UPN-directed search on the UPN/URL

Database Management Subsystem 9 hereof (i.e. RDBMS server 9) in response to a single mouse-clicking operation by the consumer on the HTML tag associated with the server-side Applet. In the illustrative embodiment, the CPIR-enabling servlet of the present invention is a program written in the Java.TM. programming language and has an HTML tag (indicated by <SERVLET>) which is designed to be included in an HTML page, much in the same way an image can be included therewithin (according to the HTML 3.2 Specification).

Detailed Description Text (99):
As indicated at Block A1 in FIG. 4E1, the first step of the method involves using the Java Servlet API to write or otherwise author the source code for a server-side CPIR-enabling Java Applet., for each UPN-specified consumer product registered in the UPN/URL Database Management Subsystem 9. In general, the source code for each server-side CPIR-enabling Java Applet (i.e. servlet) will embody one or more of following items of information, namely: (i) the UPN of the particular product on which the CPI search is to be carried out and the search results thereof displayed; (ii) Java classes required for performing a UPN-directed search on the RDBMS Server 9 using one or more Java methods running natively on the Java Web Server 11', and producing a particular Java GUI for displaying the results obtained from the UPN-directed search; and (iii) license-related information specifying the terms and conditions of the CPIR-enabling Servlet license and the conditions under which the CPIR-enabling servlet shall operate.

Detailed Description Text (101):
Notably, the Java source code for each CPIR-enabling Servlet will vary depending upon implementation. However, regardless of the particular implementation, it can be expected that each JDBC-supporting CPIR-enabling servlet when, for example, designed to search an (Oracle JDBC-supported) UPN/URL Database Server IIA for the UPC/URL list currently symbolically linked to a specified UPN and display the search results on the requesting client machine 13, will typically include Java source code specifying: (1) the importable JDBC classes required by the CPIR-enabling Servlet; (2) the importable Java classes to be used in the CPIR-enabling Servlet; (3) the JDBC driver to be loaded for the Oracle-based UPN/URL Database; (4) the connection strings to the UPN/URL Database; (5) the CPI query to be executed on the UPN/URL Database, dependent on the UPN of the associated consumer product and possibly other search criteria and Servlet licensing conditions; (6) the servlet tag, its graphical icon or alias to trigger execution the Servlet and its associated CPI query; (7) the CPI Search Result GUI to be displayed on the requesting client machine and its relative location to the associated Serviet tag; and (8) the operations that will be carried out upon execution of the CPI query including Boolean search logic to be carried out upon initiation of the UPN-directed CPI search; if anew connection is required between Java Web Server and the UPN/URL Database; Loading the JDBC driver; Connecting to the UPN/URL Database; Creating a SQL statement based on the specified Boolean search logic and UPN; Executing the SQL query statement; and Dumping the search results to the CPI Search Result GUI.

Detailed Description Text (102):
In the embodiment depicted in FIG. 2B1, a UPN-encoded Servlet is used to replace a Common Gateway Interface (CGI) script and provide a way of searching the UPN/URL Database on RDBMS Server 11', with the advantage of increased speed and stability. In this instance, CPIR-enabling Servlets are accessed by the user as an HTML tag <SERVIET> embedded in an HTML document served to the client subsystem 13. For example, when the consumer selects the servlet tag (graphically encoded by an icon or image) in an HTML-encoded document, the linked servlet residing on the server-side of the network, is automatically executed, causing a UPN-directed search to be carried on the RDBMS server 9.

Detailed Description Text (107):
As indicated at Block B2 in FIG. 4E1, the fourth step of the method involves

invoking the CPIR-enabling Java servlet by creating a URL having the path section "/servlet/" prepended to the assigned Servlet Name, so that the URL can be thereafter embodied within the servlet HTML tag <SERVLET>, prior to its insertion within the HTML code of a Web document. To invoke a servlet, the webmaster/administrator calls the servlet by creating a URL with "/servlet/" prepended to the servlet name. One can confirm that the servlet is correctly invoked by entering this URL into ones Web browser and analyzing the output of the created servlet.

Detailed Description Text (108):
As indicated at Block B3 in FIG. 4E1, the fifth step of the method involves (I) embodying the unique URL, created for each consumer product, within a CPIR-enabling servlet HTML tag <SERVLET>, (2) containing each such servlet HTML tag within an executable file, and (3) storing each such servlet tag containing file in the Central CPIR-Enabling Applet Library on the RDBMS Server 9.

Detailed Description Text (114):
With the above point in mind, it will be helpful to adopt a standardized icon for graphically indicating the presence of a CPIR-enabling servlet tag within an HTML document. In the illustrative embodiments shown in FIGS. 4P1, 4P2, 4R1, 4R2, 4S1, and 4S2, small predefined images of servicemarks such as "GO: UPC Request Cyber-Service.TM. URL Search" are served to inform the consumer that the Java object, if selected from the displayed Web page, will automatically cause a product-specific URL search to be performed with respect to the particular consumer product and the results thereof displayed at the "point of presence" of the consumer who may be residing at a particular point in an EC-enabled store (e.g. at the check-out display screen or POS), at on-line auction site, at a Web-based product advertisement, or anywhere else on the WWW. Notably, an important advantage provided by this information search technique of the present invention is that it does not disturb the consumer at his or her point of presence (or sale), where ever that may be. Instead, the CPI search and display method hereof enables the delivery of accurate product-specific manufacturer-defined information at precise points in Cyberspace by performing a single mouse-clicking operation. This enables consumers t o make informed decisions thereat based on the information displayed in the corresponding Java GUI generated upon launching a CPIR-enabling servlet at the consumer's point of presence on the WWW.

Detailed Description Text (116):
One alternative technique would be to embed within the CPIR-enabling Applet, athumb-nail or large size photo-image of the consumer product being offered for sale, lease, auction, or other purpose on the WWW. Notably, this product image any reside on the RDBMS server 9, or on the http server from which the HTML -encoded document is served. Using this technique, the consumer need only click on the image to initiate a UPN-directed consumer product information search against the UPN/URL Database Management Subsystem 9 hereof.

Detailed Description Text (123):
The Second Applet-driven Method of Accessing and Displaying Categorized UPN/URL Link Menues From the UPN/URL Database Management Subsystem the Present Invention

Detailed Description Text (125):
In general, the method of FIGS. 4G1 and 4G2 involves using a client-side CPIR-enabling Applet to automatically conduct a UPN-directed search on the UPN/URL Database Management Subsystem hereof (i.e. RDBMS server 9) in response to a single mouse-clicking operation by the consumer on the HTML tag associated with the CPIR-enabling Applet. In the illustrative embodiment, the CPIR-enabling Applet of the present invention is a program written in the Java.TM. programming language and has an HTML tag (indicated by <APPLET>) which is designed to be included in an HTML page, much in the same way an image can be included therewithin (according to the HTML 3.2 Specification).

Detailed Description Text (132):
Notably, the Java source code for each CPIR-enabling Applet will vary depending upon implementation. However, regardless of the particular implementation, it can be expected that each CPIR-enabling Applet designed, for example, to search an (Oracle-based JDBC) RDBMS Server 9 for a current categorized UPC/URL list/menu symbolically linked to a specified UPN and thereafter display the results in an independent Java GUI, will typically include Java source code specifying: (1) the importable JDBC classes required by the CPIR-enabling Applet; (2) the importable Java classes to be used in the CPIR-enabling Applet; (3) the JDBC driver to be loaded for the Oracle-based RDBMS server 9; (4) the connection strings to the RDBMS server 9; (5) the CPI query to be executed on the UPN/URL Database, dependent on the UPN of the associated consumer product and possibly other search criteria and Applet licensing conditions; (6) the Applet tag, its graphical icon or alias to trigger execution the Applet and its associated CPI query; (7) the CPI Search Result GUI to be displayed on requesting client and its relative location to the associated applet tag; and (8) the operations that will be carried out upon execution of the CPI query including Boolean search logic to be carried out upon initiation of the UPN-directed CPI search; if anew connection is required between Java Web Server 11" and the RDBMS server 9; Loading the JDBC driver; Connecting to the RDBMS server 9; Creating a SQL statement based on the specified Boolean search logic and UPN; Executing the SQL query statement; and Dumping the search results to the CPI Search Result GUI.

Detailed Description Text (154):
In an alternative embodiment shown in FIG. 4M2, the distribution of CPIR-enabling Applet tags is enabled by providing a "CPIR-enabling Applet Tag Download" Link/Button 100 on the Web page of each product being offered for sale in an EC-enabled store or product catalog maintained by a manufacturer, retailer or other party. This inventive feature should be most useful in EC-enabled Business-to-Business (i.e. Vendor-to-Retailer) UPC-based Product Catalogs such as, for example, QRS's Keystone UPC Product Catalog, where purchasing agents of retailers could download "Applet tag containing" files, along with product images and other product information after placing a purchase order therethrough, for use in constructing the retailer's EC-enabled (retailer-to-consumer) store or product catalog. Using this method of the present invention, consumers would be provided with instant manufacturer-defined product information prior to, and/or after a consumer purchase at an EC-enable store on the WWW, thereby greatly improving the consumer shopping experience on the WWW.

Detailed Description Text (160):
In the illustrative embodiments shown in FIGS. 4P1, 4Q1, 4R1 and 4S1, servicemarks such as "UPC Request.TM. Cyberservice.TM. URL Search" serve to inform the consumer that the object, if selected from the displayed Web page, will cause a URL search to be performed with respect to the particular consumer product and the results thereof displayed the "point of presence" of the consumer which may be at a particular point in an EC-enabled store (e.g. at the check-out display screen or POS), at on-line auction site, at a Web-based product advertisement, or anywhere else on the WWW. Notably, an important advantage provided by this information search technique of the present invention is that it does not disturb the consumer at his or her point of presence (or sale), where ever that may be. Instead, the CPI-based search and display method of the present invention enables the delivery of accurate product-specific manufacturer-defined information at a particular point in Cyberspace by the consumer performing a single mouse-clicking operation. This enables the consumer to make an informed decision thereat based on the information displayed in the corresponding Java GUI generated upon launching the CPIR-enabling Applet at the consumer's point of presence on the WWW.

Detailed Description Text (168):
The Third Applet-driven Method of Accessing and Displaying Categorized UPN/URL Link

Menues From the UPN/URL Database Management Subsystem the Present Invention

Detailed Description Text (170):
In general, the method of FIGS. 4I1 and 4I2, like that of FIGS. 4G1 and 44G2, involves using a client-side CPIR-enabling Applet to automatically conduct a UPN-directed search on the UPN/URL Database Management Subsystem hereof (i.e. RDBMS server 9) in response to a single mouse-clicking operation by the consumer on the HTML tag associated with the CPIR-enabling Applet. In the illustrative embodiment, the CPIR-enabling Applet of the present invention is a program written in the Java.TM. programming language and has an HTML tag (indicated by <APPLET>) which is designed to be included in an HTML page, much in the same way an image can be included therewithin (in accordance with the HTML 3.2 Specification).

Detailed Description Text (176):
Notably, the Java source code for each CPIR-enabling Applet will vary depending upon implementation. However, regardless of the particular implementation, it can be expected that each CPIR-enabling Applet designed, for example, to search an (Oracle-based JDBC) RDBMS Server 9 for current UPC/URL list symbolically linked to a specified UPN and thereafter display the results in an independent Java GUI, will typically include Java source code specifying: (1) the importable JDBC classes required by the CPIR-enabling Applet; (2) the importable java classes to be used in the CPIR-enabling Applet; (3) the JDBC driver to be loaded for the Oracle-based RDBMS server 9; (4) the connection strings to the RDBMS server 9; (5) the CPI query to be executed on the UPN/URL Database, dependent on the UPN of the associated consumer product and possibly other search criteria and Applet licensing conditions; (6) the Applet tag, its graphical icon or alias to trigger execution the Applet and its associated CPI query; (7) the CPI Search Result GUI to be displayed on requesting client and its relative location to the associated Applet tag; and (8) the operations that will be carried out upon execution of the CPI query including Boolean search logic to be carried out upon initiation of the UPN-directed CPI search; if anew connection is required between Java Web Server 11'" and the RDBMS server 9; Loading the JDBC driver; Connecting to the RDBMS server 9; Creating a SQL statement based on the specified Boolean search logic and UPN; Executing the SQL query statement; and Dumping the search results to the CPI Search Result GUI.

Detailed Description Text (188):
The Fourth Applet-driven Method of Accessing and Displaying Categorized UPN/URL Link Menus From the UPN/URL Database Management Subsystem the Present Invention

Detailed Description Text (190):
In general, the method of FIGS. 4K1 and 4IK2, like that of FIGS. 4G1 and 4G2 and 4I1 and 4I2 involves using a client-side CPIR-enabling Applet to automatically conduct a UPN-directed search on the UPN/URL Database Management Subsystem hereof (i.e. RDBMS server 9) in response to a single Mouse-clicking operation by the consumer on the HTML tag associated with the CPIR-enabling Applet. In the illustrative embodiment, the CPIR-enabling Applet of the present invention is a program written in the Java.TM. programming language and has an HTML tag (indicated by <APPLET>) which is designed to be included in an HTML page, much in the same way an image can be included therewithin (in accordance with the HTML 3.2 Specification).

Detailed Description Text (197):
Notably, the Java source code for each CPIR-enabling Applet will vary depending upon implementation. However, regardless of the particular implementation, it can be expected that each CPIR-enabling Applet designed, for example, to search an (Oracle-based JDBC) RDBMS Server 9 for current UPC/URL list symbolically linked to a specified UPN and thereafter display the results in an independent Java GUI, will typically include Java source code specifying: (1) the importable JDBC classes required by the CPIR-enabling Applet; (2) the importable java classes to be used in

the CPIR-enabling Applet; (3) the JDBC driver to be loaded for the Oracle-based RDBMS server 9; (4) the connection strings to the RDBMS server 9; (5) the CPI query to be executed on the UPN/URL Database, dependent on the UPN of the associated consumer product and possibly other search criteria and Applet licensing conditions; (6) the Applet tag, its graphical icon or alias to trigger execution the Applet and its associated CPI query; (7) the CPI Search Result GUI to be displayed on requesting client and its relative location to the associated Applet tag; and (8) the operations that will be carried out upon execution of the CPI query including Boolean search logic to be carried out upon initiation of the UPN-directed CPI search; if anew connection is required between Java Web Server 11"" and the RDBMS server 9; Loading the JDBC driver; Connecting to the RDBMS server 9; Creating a SQL statement based on the specified Boolean search logic and UPN; Executing the SQL query statement; and Dumping the search results to the CPI Search Result GUI.

Detailed Description Text (210):
Also, while the above-described method of information searching, access and display has been described in connection with consumer products, it is understood that the principles of the present invention can also be used to deliver Web-based information to consumers in connection with a particular consumer service which has been assigned a Universal Service Number (USN) that functions in a similar manner to a UPN used in connection with a particular consumer product. In such alternative embodiments, the UPN/URL Database Management Subsystem 9 can be readily extended to contain symbolic links between Universal Service Numbers (USN) and URLs to form a UPS/URL database along the principles described hereinabove.

Detailed Description Text (212):
An example of a CPIR-enabling Applet designed to produce a Java GUI for the "manufacturer-unrestricted or generalized" UPC Request CPI Service is illustrated in FIGS. 4N1 and 4Q1 by using a graphical icon or button, displayed on the lower portion of each display screen, and labeled as "UPC REQUES.TM. CENTRAL Product Information Search". An example of the Java GUIs produced by these CPIR-enabling Applets are illustrated in FIG. 4N2 and 4Q2, respectively.

Detailed Description Text (213):
An example of a CPIR-enabling Applet designed to produce a CPID-enabling Java GUI for the "manufacturer-restricted" UPC Request Retailer CPI Service is indicated in FIG. 4O1 by a graphical icon or button, displayed on the lower portion of each display screen, and labeled as "UPC REQUEST.TM. Retail Product Information @SPORTS PLACE". An example of the Java GUI produced by this CPIR-enabling Applet is indicated in FIG. 4O2. Notably, this type of CPIR-enabling Applet provides consumers with desired information about the UPN-encoded product, while disabling the consumer from browsing for merchandise not carried in the EC-oriented store or catalog of the hosting retailer.

Detailed Description Text (214):
As illustrated above, in the case where the CPIR-enabling Applet is encoded with a particular UPN, then the function of the CPIR-enabling Applet will be to generate and display an independent pop-up Java GUI at the point where the Applet tag (or associated image) is embedded, for displaying the search results made against the consumer product identified by the UPN embodied within the CPIR-enabling Applet. An example of a CPIR-enabling Applet designed to produce a CPID-enabling Java GUI for a Cyber-Service URL Search is indicated in FIGS. 4P1 and 4R1 by a graphical icon or button, displayed on the lower portion of each display screen, and labeled as "UPC REQUEST.TM. Cyber-Service.TM. URL Search." Notably, operation of this type of CPIR-enabling Applet can be restricted to a particular retailer (or manufacturer) by the inclusion of a domain name constraint within the Applet itself, as described hereinabove. In the case of the Cyber-Service URL Search of the UPC Request System, the executed CPIR-enabling Applet automatically returns for display a menu of categorized URLs symbolically linked to the encoded UPN by the manufacturer and/or

its agent. It would be desirable to embed this type of CPIR-enabling Applet on Web-documents in an EC-enabled stores and on-line catalogs of a particular retailer or manufacturer, displaying consumer products to be purchased, as well as on Web-documents serving as Internet-based product advertisements.

Detailed Description Text (215):
Referring to FIGS. 4N1 and 4N2, the above-described method of CPI searching and display will now be illustrated in the context of browsing a WWW Search Directory or Engine, and looking for a simple yet effective way of finding accurate consumer product related information on a particular product, or class of products. When searching for consumer product information at a WWW Search Directory or Engine, such as Yahoo, Excite, Alta Vista, Lycos, etc., it will be desirable for the consumer to search against all manufacturers within the entire UPN/URL Database Management Subsystem 9 before returning the search results to the consumer for display. Therefore, in this sort of Cyberspace environment, it will be oftentimes desirable to embed a CPIR-enabling Applet in the home-page of the WWW search directory or engine so that, upon clicking the graphical icon thereof, an independent Java GUI to the UPC Request Central WWW site will be automatically produced so that all modes of searching are made available to the consumer against all manufacturers registered (and possibly unregistered) within the UPN/URL Database Management Subsystem 9, as shown in FIG. 4N2. Notably, this Java GUI is very similar to the Java GUI set forth in FIG. 3C.

Detailed Description Text (216):
Referring to FIGS. 4O1 through 4O2, the above-described method of CPI searching and display is illustrated in a different context, wherein a consumer is shopping/browsing an EC-enabled storefront of a particular retailer, and considering whether or not to make an on-line purchase of a particular consumer product displayed within the catalog pages thereof. In this sort of environment, the retailer will typically prefer that the consumer can only search on manufacturers of merchandise being offered for sale within the EC-enabled store, lest the consumer will encouraged to leave upon finding out that what he or she is looking for is available in a different retail store, and not the store at which he or she is present. Therefore, in this sort of Cyberspace environment, it will be oftentimes desirable to embed a CPIR-enabling Applet in the home-page (or other conspicuous locations) of each retailer's WWW EC store so that, upon clicking the graphical icon thereof, an independent Java GUI to the UPC Request Retailer WWW site "@the retailer store" will be automatically produced so that all modes of searching are made available to the consumer against only those manufacturers registered (and possibly unregistered) with the UPN/URL Database Management Subsystem 9 which supply consumer products for sale within the particular retail store, as shown in FIG. 4O2. Notably, this Java GUI is similar to the Java GUI set forth in FIG. 3C, except that a "manufacturer filter" set by the retailer UPC product catalog is used to filter out the search results displayed on the Java GUI.

Detailed Description Text (217):
Referring to FIGS. 4P1 and 4P2, it can be seen that the consumer within the EC-enabled store shown in FIGS. 4O1 and 4O2 has proceed to look at a particular product in the retail store (e.g. the "Ultralite Dagger Mountain Bike" being offered for sale for $285.00). At this point of presence within the EC-enabled retail store, the consumer might like to review the very best information published wherever on the WWW relating to this particular consumer product. Therefore, in this sort of Cyberspace environment, it will be desirable to embed a CPIR-enabling Applet within or near the image of this product in the retailer's WWW EC store so that, upon clicking the graphical icon thereof, a "UPC Request Cyber-Service URL Search" will be automatically carried out within the UPN/URL Database Management Subsystem 9, and the search results thereof displayed in a Java GUI, as shown in FIG. 4P2. As shown, the Java GUI displays a menu-formatted list of categorized URLs that have been symbolically linked to the UPN of the consumer product on which the

search inquiry was initiated. Typically, this menu of URLs, accessed from the UPN/URL Database Management Subsystem 9, would have been updated as early as the night before during UPN/URL link updating/management operations carried out between (i) the UPN/URL catalog maintained in a client computer subsystem 13 within the backoffice of the manufacturer, and (ii) the Manufacturer/Product Registration Subsystem 31, 33, using electronic d at a interchange processes based on any one of number of protocols (e.g. ftp, EDI, XML/ICE, etc.).

Detailed Description Text (218):
Referring to FIGS. 4Q1 through 4Q2, the above-described method of CPI display is illustrated in the context of a consumer visiting an on-line EC-enabled auction site (e.g. at http://www.ebay.com), and considering whether or not to place a bid on a particular consumer product displayed within the auction listings thereof. In general, this environment is similar to the situation where a consumer finds him/herself searching for consumer product information at a WWW Search Directory or Engine, such as Yahoo, Excite, Alta Vista, Lycos, etc. In such an environment, it will be desirable for the consumer to search against all manufacturers within the entire UPN/URL Database Management Subsystem 11 before returning the search results to the consumer for display. Therefore, in this sort of Cyberspace environment, it will be oftentimes desirable to embed a CPIR-enabling Applet in the home-page of the WWW on-line auction site so that, upon clicking the graphical icon thereof, an independent Java GUI to the UPC Request Central WWW site will be automatically produced so that all modes of searching are made available to the consumer against all manufacturers registered (and possibly unregistered) within the UPN/URL Database Management Subsystem 9, as shown in FIG. 4Q2. Notably, this Java GUI is very similar to the Java GUI set forth in FIG. 3C.

Detailed Description Text (219):
Referring to FIG. 4R1 and 4R2, it can be seen that the consumer within the on-line auction site shown in FIGS. 4Q1 and 4Q2 has proceed to look at a particular item being auctioned off (e.g. the "Sony Mavica MVC-FD81" at a current bid of $420.50). At this point of presence within the on-line auction site, the consumer might very well like to review the very best information published wherever on the WWW relating to this particular consumer product. Therefore, in this sort of Cyberspace environment, it will also be desirable to embed a CPIR-enabling Applet within or near the title of the product being auctioned (or image thereof if available) so that, upon clicking the graphical icon thereof, a "UPC Request Cyber-Service" URL Search will be automatically carried out within the UPN/URL Database Management Subsystem 9, and the search results thereof displayed in a CPID-enabling Java GUI, as shown in FIG. 4R2. As shown, this Java GUI displays a menu-formatted list of categorized URLs that have been symbolically linked to the UPN of the auctioned consumer product on which the search inquiry was initiated. Typically, this categorized menu of URLs, accessed from the UPN/URL Database Management Subsystem 9, would have been updated as early as the night before during daily UPN/URL link updating/management operations carried out in the manner described hereinabove.

Detailed Description Text (220):
Referring to FIGS. 4S1 through 4S2, the above-described method of CPI searching and display is illustrated in the context of a consumer visiting a typical WWW site (e.g. the Applicant's Intellectual Property Law Firm at http://www.tjpatlaw.com), whereupon an Internet advertisement is presented o for a particular consumer product, solely for illustrative purposes. At this point of presence on the WWW, the consumer might very well like to review information published on the WWW relating to the advertised consumer product. Therefore, in this sort of Cyberspace environment, it will also be desirable to embed a CPIR-enabling Applet within, closely near, or immediately about the space of the advertisement so that, upon clicking the image associated thereof, a "UPC Request Cyber-Service" URL Search will be automatically carried out within the UPN/URL Database Management Subsystem 9, and the search results thereof displayed in a CPID-enabling Java GUI, as shown in FIG. 4S2. As shown, this Java GUI displays a menu-formatted list of categorized

URLs that have been symbolically linked to the UPN of the advertised consumer product on which the search inquiry was initiated. Typically, this categorized menu of URLs, accessed from the UPN/URL Database Management Subsystem 9, would have been updated as early as the night before UPN/URL link updating/management operations carried out in the manner described hereinabove.

Detailed Description Text (221):
In situations where the advertisement itself embodies a Java-Applet, as in the case of most banner-type advertisements, it would be desirable to embed the CPIR-enabling Applet within the HTML-encoded document displayed within the new Java GUI generated when the Java-Applet is executed by the consumer upon his or her initial encounter of the advertisement. Upon the display of the menu-formatted list of categorized URLs within the CPID-enabling Java GUI, the consumer can easily access different Web-documents containing information related to the advertised consumer product by simply selecting the URL and linking to the information resource to which it points on the WWW. Notably, the displayed URL menu would include (i) one or more URLs pointing to EC-enabled stores and on-line catalogs at which the advertised product can be purchased over the Internet, as well as (ii) one or more URLs pointing to "brick and mortar" type retail stores at which the advertised product can be purchased in the stream of commerce.

Detailed Description Text (222):
As shown in FIG. 4S3, the consumer having accessed the product-specific search results of FIG. 4S2, may then select, from the displayed URL Menu, a URL displayed in the "Buy On The Web" URL category thereof, thereby automatically linking to the EC-enabled store or product catalogue specified by the selected URL, as shown in FIG. 4S2, and thus enabling the purchase of the advertised product or service thereat. Preferably, the EC-enabled store or product catalog employs the "one-click purchase order" placement system and method taught in U.S. Pat. No. 5,960,411 to Hartman, et al., and assigned to Amazon.com, Inc., which is incorporated herein by reference in its entirety. This would simplify ordering the product by the retailer having the consumer's credit card and shipping address information on file.

Detailed Description Text (223):
Thus, the CPI-based search and display method of the present invention gives rise to anew method of and system for purchasing consumer products over the Internet (e.g. WWW) comprising the steps of: embedding a UPN-encoded CPIR-enabling Applet within the HTML-code of a consumer product advertisement, wherein the CPIR-enabling Applet, when executed, automatically displays a categorized URL menu containing one or more URLs pointing to one or more EC-enabled stores or on-line catalogs on the WWW at which the consumer product identified by the encoded UPN can be purchased and delivered to a particular address in physical space.

Detailed Description Text (224):
Referring to FIGS. 4T1 through 4T2, the above-described method of CPI searching and display is illustrated in the context of a consumer visiting a particular on-line electronic trading WWW site (e.g. http://www/etrade.com). At this site, the consumer is assumed to be reviewing the performance chart of a particular consumer product company displayed at this electronic trading WWW site, and is considering whether or not to buy, keep or sell securities (e.g. stock or bonds) in this consumer product company. At this point of presence on the WWW, the consumer decides that he or she would like to first ascertain specific information about the company's products by initiating a trademark/company name-directed CPI search according to the principles of the present invention. In accordance with the present invention, this would be achieved by the consumer identifying a client-side or server-side CPIR-enabling Java Applet embedded within the HTML code of the performance chart displayed at the on-line electronic trading WWW site. In the illustrated embodiment, the CPIR-enabling Applet is graphically indicated by an associated graphical image (e.g. UPC Request.TM. Cyber-Service.TM. Trademark-Directed URL Search) and is encoded with the trademark an/or company name of a

particular manufacturer/vendor associated with the displayed performance chart. Notably, the creation, distribution and embedding of such CPIR-enabling Applets must be carried out well in advance of the consumer arriving at the particular point of presence shown in FIG. 4T1. In accordance with the principles of the present invention, when the consumer performs a single mouse-clicking operation on the graphical image associated with the embedded CPIR-enabling Java Applet, the underlying CPIR-enabling Applet is executed and atrademark-directed URL search is automatically made against the UPN/URL Database Management Subsystem 9 hereof. Quickly thereafter, the results from the trademark/company name directed search are automatically displayed in a Java GUI on the browser of the requesting consumer's client machine, as shown in FIG. 4T2. As shown, the consumer is free to scroll through the displayed GUI, looking for URLs on particular consumer products of the manufacturer/vendor.

Detailed Description Text (225):
Preferably, in above application, each entry in the displayed Trademark Search Results screen shown in FIG. 4T2 is itself a CPIR-enabling Java Servlet which, when clicked upon, automatically initiates a UPN-directed CPI search against a particular product of the manufacturer related to the displayed stock performance chart, as taught in great detail hereinabove. This novel technique will greatly simplify accessing and displaying accurate and up-to-date UPC/URL menus on the products offered by a particular company in which a consumer is considering buying, keeping or selling a particular number of financial securities. Also, while conducting such on-line CPI research, the consumer may also consider purchasing a particular consumer product at an EC-enabled store or product catalog, as illustrated in FIG. 4S3, supra.

Detailed Description Text (229):
For example, if the IPI Web-site supported by the IPI Finding and Serving Subsystem hereof is intended for access by bar code driven kiosks, then the HTML documents related to the IPI Website will be particularly adapted to facilitate the use of bar code symbol reader at the client subsystem. This way UPNs (e.g. UPC or EAN symbols) can be easily entered into the subsystem without manual key-entry operations. In contrast, if the IPI Web-site supported by the IPI Finding and Serving Subsystem hereof is intended for access by client subsystems not having bar code symbol readers (e.g. Web-enabled computer systems at home, in the office or on the road), then the HTML documents related to the IPI Website will be particularly adapted to o facilitate the use of data-entry display screens at the client subsystem. This way, UPNs (e.g. UPC or EAN symbols) can be easily entered into the subsystem using bar code symbol scanners avoiding manual key-entry operations. In the illustrative embodiment, bar code-code driven and manual data-entry IPI Websites are served from a "framed" Java GUI, in which the control strip 20B has six (5) Check Boxes 21A through 21F described above to enable the consumer, retail sales/service personnel as well as manufacturers to select the particular mode of operation that suits his or her consumer product information needs at any particular instance in time.

Detailed Description Text (230):
It understood that the use of Java Applets (including Servlets) will be o most beneficial in constructing Java-based IPI Central and retail WWW sites, as indicated above, and in most instances will be preferable over static HTML documents and CGIs linking the IPD (http) server 11 to the backend RBDMS servers 9 of the system. However, for purposes of illustration only, the six primary modes of operation of the system will be described below using a CGI implementation, illustrated in FIG. 2B2. However, it is understood that implementations using CPIR-enabling Servlets as shown in FIG. 2B1 can be used to replace such CGI constructions. Also, implementations using CPIR-enabling Applets as shown in FIGS. 2B3 and 2B4 can be used to enable access to the UPN/URL Database Management Subsystem 9 and its supporting RDBMS servers.

Detailed Description Text (233):
As indicated at Block A in FIG. 6A, when selected from the user interface of an IPI Website, the first Check Box type button 21A automatically activates the Manufacturer/Product Registration Mode of the IPI Finding and Serving Subsystem by sending an HTTP request to the IPD Server(s) 11" based on a URL hot-linked to the selected Check Box. As indicated at Block B in FIG. 6A, this causes a HTML-encoded document residing on the IPD Server 11" shown in FIG. 2B2, to requesting client subsystem 13 or display on the information display frame 20C thereof. The HTML document of the illustrative embodiment displays several types of information relevant to the Manufacturer/Product Registration Mode, namely: eligibility requirements (i.e. qualifications) for a manufacturer to register with the IPI Finding and Serving Subsystem; optional ways of registering consumer products and product-related information with the Manufacturer/Product Registration Subsystem hereof 33; ways of acquiring computer software necessary for managing consumer product-related information (e.g. UPNs, URLs, trademarks and product descriptors) on a particular computing platform using EDI (or XML/EDI) techniques supported by the Manufacturer/Product Registration Subsystem 33; etc; and one or more Check Boxes embodying links (i.e. anchors) to HTML documents, CGI scripts and the like designed to facilitate this mode of operation. Notably, at least one of these HTML documents will be located on the Web Document Server 30 of the Manufacturer/Product Registration Subsystem 33, providing manufacturers (and/or their designated information-managers and agents) with a point of entry into the manufacturer/product registration process hereof. As indicated at Block C in FIG. 6A, the manufacturer and or its agent follow the instructions displayed on the HTML document, linking to the Web Document Server 30 of the Manufacturer/Product Registration Subsystem 33 and filling out the various HTML forms transmitted to the requesting client subsystem, downloading Web-based EDI (or XML/EDI) software for UPN/URL management; and the like. While carrying out registration of manufacturers with the subsystem is relatively straightforward, there are anumber of different ways of carrying out the Product Registration Mode of the subsystem. These alternative techniques will be described below.

Detailed Description Text (234):
The first method illustrated in FIGS. 2-1 and 2-2 involves by carrying out FTP between a client subsystem of the registering manufacturer (or its agent) Mi and IPD Server 11" in order to update the IPI Registrant Database associated therewith. This can be carried out by the manufacturer's officer or agent surfing to the IPI Website, selecting the "Product Registration Mode" from the control strip, and then following the instructions displayed on the various screens of the Website in this mode. When using the first method, product UPCs, URLs and other information elements can be formatted within suitable Product Registration Forms and transmitted by FTP from the client subsystem or Database Server of a registering manufacturer to the IPD Server 11" so that the IPI Registrant Database thereof can be updated accordingly. The first method will be desirable typically when registering a few consumer-products.

Detailed Description Text (235):
The second method illustrated in FIG. 2A, involves first carrying out EDI between a client subsystem of the registering manufacturer (or its agent) and the UPN/URL Database Subsystem 9, and then carrying out FTP or SMTP between the client subsystem and IPD Server 11" in order to update the IPI Registrant Database maintained therein. The second method will be desirable when a manufacturer needs or desires to register a large number of consumer-products. The details of these information transmission methods will be described below.

Detailed Description Text (236):
When using the second method, conventional EDI protocols or more o modern protocols (e.g. XML/ICE) can be used to transmit product UPCs, URLs and other information elements from client subsystems or database servers of manufactures to the UPN/URL Database Subsystem 9 of the present invention. FTP can be used to transmit UPCs and

URLs from the UPN[redacted] Database Subsystem to each I[redacted]erver in the system so that the IPI Registrant Database thereof can be updated accordingly. Once registered with the system using either of these methods in the Product Registration Mode, such consumer-products can be easily found on the Internet by anyone wishing to use the product finding techniques of the present invention.

Detailed Description Text (240):
Upon registering the manufacturer with the system, the manufacturer is asked to select which version of "customized" WebDox Remote.TM. software (i.e. the UPN/URL Registration Application) the manufacturer would like downloaded to its client computer system 13 (e.g. WebDox Remote with UPN/URL Database and CGI scripts for MacOS WebServer, WebDox Remote with UPN/URL Database and CGI scripts for UNIX Web Server, or WebDox Remote with UPN/URL Database and CGI scripts for NT Web Server). Once the manufacturer makes its selection, the customized WebDox Remote software is automatically downloaded to the manufacturer's client computer system 13. This downloaded software includes a computer program that automatically generates (on the manufacturer's) client subsystem, a relational database management system (RDBMS) which allows the manufacturer (or its agents) to easily construct and maintain a UPN/URL database (akin to that specified in FIG. 4A1) but restricted to containing information relating only to the manufacturer's products. Thus, when the manufacturer attempts to enter a UPC number into the manufacturer's UPN/URL database that does not contain the 6-digit Manufacturer Identification Number assigned to the manufacturer by the UCC, the RDBMS automatically blocks all such information entries. Consequently, the UPN/URL database can only maintain information pertaining to the registered manufacturer's products and information relating thereto on the Internet. As the manufacturer adds or removes products from its retail or wholesale line, the database administrator simply adds or removes the UPC and URL information relating thereto from the RDBMS. As will be described in greater detail hereinafter, such database changes are periodically transmitted to the WebDox.TM. Server 30 so that the IPI Registrant Database (i.e. master UPN/URL database) of the system (maintained on the IPD Servers thereof) can be updated in atimely manner.

Detailed Description Text (241):
Preferably, the limited or restricted version of the UPN/URL database maintained by each registered manufacturer on its client subsystem 13 is connected to the manufacturer's Internet Server 12' (or 12B) by a CGI script or Java method, as shown in FIGS. 2-1 and 2-2. In this way, the manufacturer's limited version of the UPN/URL database can be made accessible to consumers world-wide from the manufacturer's Website which, in the illustrative embodiment, is assumed to be hosted on an Internet information server 12' or 12B that is similar to an IPI Server 12 described in detail hereinabove. In order to simply the process of serving of the manufacturer's limited-version of the UPN/URL database on the WWW, it is preferred that the CGI script 40, input forms, output forms, and methods for searching and the displaying the results from the limited-version UPN/URL database are predesigned for use with manufacturer's Internet Server 12' (taking into consideration its operating system and the like). This way, prior to registration the manufacturer need only make a selection of the type of customized WebDox Remore software it needs for its computing and Internet serving platform(s). Then, during software download, the WebDox Server 30 simply transmits the suitable version of the customized WebDox Remote software to the manufacturer so that it can create, maintain and serve (on the WWW) its limited version of the UPN/URL database in a "turn-key" manner.

Detailed Description Text (242):
In the illustrative embodiment of the present invention, the homepage of each registered manufacturer's Website will display a visually conspicuous radio button labeled "UPC Request.TM. Product Finder" or the like. Moreover, whenever a consumer attempts to search the manufacturer's limited-version UPN/URL database for products not registerable to the manufacturer (i.e. using UPC numbers not containing the

manufacturer's 6-digit UCC Manufacturer Identification Number), the limited-version of the UPN/URL database will automatically display an HTML-encoded message from the manufacturer's Website, urging the consumer to surf to the IPI Registrant Database of the system (maintained on the network of IPD servers 11). Preferably, such HTML-encoded messages will have a hot-linked URL (i.e. anchor) to Website(s) providing consumer access to the "master" UPN/URL database.

Detailed Description Text (243):
The WebDox RemoteTM computer system 13 available to each registered manufacturer has both online and offline modes of operation. In the offline mode, the manufacturer responds to a UPN/URL Registration Request from the WebDox.TM. Server in the following manner. First, the WebDox Remote.TM. software analyzes the limited-version of the UPN/URL database that it has been currently created and maintained by the manufacturer or its designee. Thereafter, the WebDox software automatically creates a UPN/URL Registration Response document which contains a set of currently active URLs specifying the address location of Web-based information resources associated with each UPC-encoded product of the manufacturer. Then, WebDox Remote.TM. program establishes an Internet connection with the WebDox.TM. Server, through a "Get/Send Mail" option. This delivers the UPN/URL Registration Response (document) to the WebDox.TM. Server 30 and retrieves any documents which are waiting thereat for the manufacturer. These new documents are listed by WebDox Remote.TM. program and presented in the InBasket of the manufacturer's WebDox Remote.TM. computer system 13.

Detailed Description Text (244):
In the online mode, WebDox RemoteTM (under the control of the Form Application) can also send UPN/URL Registration Request documents immediately. For very sensitive applications (i.e. Just-in-Time), this ensures that the UPN/URL Registration Response document is received at the WebDox.TM. Server 30 the moment that the manufacturer completes the document.

Detailed Description Text (245):
In general, the WebDox.TM. Server 30 provides a high-volume document processing and mailboxing environment between the WebDox Server and the WebDox Remote.TM. system of each registered manufacturer. WebDox.TM. Server 30 performs: permanent storage and tracking of all UPN/URL Registration Request documents sent and UPN/URL Registration Response documents received; automatic reconciliation of acknowledgments from WebDox Remote.TM. program; automatic creation of user-friendly receipt messages to the manufacturer; "mailboxing" of outbound UPN/URL Registration documents for retrieval by manufacturer; and automatic manufacturer and profile creation based on forms received from manufacturers. The WebDox.TM. Server 30 consists of online components that run as extensions to Microsoft's Internet Information Server (IIS) using the ISAPI interface. This provides higher performance and lower hardware requirements than a conventional CGI Web Interface. Processing intensive tasks are performed asynchronously from the Web server. An integrated queuing and dispatching system manages the processing of documents and interaction with the corresponding application. For large volume situations, the WebDox.TM. Server components can be deployed on different machines, the WebDox.TM. Server components (ISAPI extensions) on one machine, the processing components and database on another machine.

Detailed Description Text (246):
Data for UPN/URL Registration Request documents to be sent to manufacturers is extracted from the IPI Registrant Database using an interface or utility program. The document data (e.g. information fields associated with UPN/URL registration) can then be accepted by WebDox in a direct manner after formatting. The UPN/URL Registration Request document should be formatted to a file structure created during the design of the UPN/URL Registration Application. The WebDox.TM. Server 30 then converts the application data into a UPN/URL Registration request document (i.e. data package). The data package for each manufacturer is then stored (as a

message) in an assigned Mailbox of the WebDox.TM. Server 30. These messages are then available to be retrieved by the registered manufacturers using WebDox Remote's.TM. "Get/Send Mail" feature.

Detailed Description Text (247):
As discussed above, the WebDox Remote.TM. program transmits messages (e.g. UPN/URL Registration Response documents) to the WebDox.TM. Server 30, where, after passing security checks, they are placed in the WebDox Mailbox system. Incoming (document) messages are received from the Mailbox, processed, and converted into data files for direct transfer to the database management system handling the IPI Registrant Database.

Detailed Description Text (249):
WebDox Admin.TM. Computer system 31 provides an easy-to-use tool to manage the community of manufacturers, review the status of documents, and configure the WebDox.TM. Server 30, including: ad hoc maintenance of manufacturer information; online display of the Mailbox permitting inquiry into document status or document activity for particular manufacturers, and the ability to reset document status; creation and maintenance of UPN/URL Registration Profiles; preparation of "releases" of new and updated UPN/URL Registration Applications; Distribution of new and updated UPN/URL Registration Applications; and automatic inventory and tracking of UPN/URL Registration Applications distributed to manufacturers.

Detailed Description Text (250):
In the preferred embodiment, UPN/URL Registration Application design and development is carried out on a Windows 95 or NT workstation. The UPN/URL Registration Application is developed, tested, and then fully implemented for production with manufacturers. New or updated UPN/URL Registration Applications are registered with the WebDox Admin.TM. computer system 31 and are then distributed to the manufacturers as described herein above.

Detailed Description Text (251):
In the preferred embodiment, UPN/URL Registration Applications are developed using Microsoft Visual Basic.TM. and related software tools. These products provide rapid design and creation of the screen-based forms that the manufacturer uses. In addition, the "intelligence" behind the form, in the UPN/URL Registration Application, can be very powerful, making the manufacturer's work easier while ensuring that the user and Server application receive high quality data.

Detailed Description Text (252):
The WebDox Admin.TM. system handles the distribution of UPN/URL Registration Applications to manufacturers. New UPN/URL Registration Applications can be sent to some or all of the existing manufacturers assigned UPC Manufacturer Identification Numbers. Updates to UPN/URL Registration Applications can be sent to manufacturers who are currently using that UPN/URL Application. The actual update is distributed by sending a small notification message to each manufacturer, which then results in the remote site downloading the new forms from the WebDox.TM. Server 30, as hereinbefore described above.

Detailed Description Text (253):
Notably, the WebDoc.TM. Solution has been described above provides one way and means of implementing a method of electronic data and document interchange between client machines of manufacturers and the IPI Registrant Database (i.e. master UPN/URL database in subsystem 9) of the system of the present invention. It is understood, however, that many different types of electronic data interchange solutions (e.g. XML or XML/EDI) can be used to practice the system and method of UPN/URL database management in an efficient and timely manner so that consumers will always be provided with up-to-date URL links on the Internet. For example, the new CenterStage 4 Application Suite from On Display, Inc. of San Ramon Calif., can be used to enable XML-based electronic data interchange (i.e. transfer) between the

client computer subsystems 13 operated within the backoffices of manufacturers, and the IPI Registrant Database (i.e. master UPN/URL database) of the system hereof operated in the backoffice of the system administrator. Manufacturers (i.e. vendors) can format their datatransactions in any of the many new languages of electronic-business (e.g. cXML, RosettaNet, CBL, BizTalk, OBI, ICE proprietary formats, or standard EDI formats such as ANSI X12), and the CenterStage 4 platform will automatically convert their transactions into the chosen formats of the system administrator responsible for managing the master UPN/URL database.

Detailed Description Text (255):
In FIG. 2C, there is disclosed anovel distributed method of collecting, managing and transmitting UPN/URL menus for consumer products. Notably, this distributed system and method will be useful in large corporate environments, where departmentalization is the general rule. As shown, instead of each manufacturer having a single EDI-enabled workstation (equipped with EDI or EDI/XML software) 13 for carrying out UPN/URL management operations, a group of EDI-enabled client computers 13 are connected to a local or wide areanetwork 200 via anetwork-centric Web (http) server 133 using anetwork router 201 to interface with the infrastructure of the Internet, as well as the other local or wide area network 200 as shown in FIG. 2C. Preferably, each client computer 13 on the LAN or WAN is equipped with UPN/URL management software for managing the consumer product information collected in the UPN/URL Database for a particular manufacturer, as shown in FIGS. 4A1 through 4B.

Detailed Description Text (256):
In one arrangement, each manufacturer-operated client machine 13 would be assigned the task of managing the UPN/URLs associated with a particular department of the manufacturer (e.g. engineering department, sales department, service/support department, marketing department, advertising department, etc.). The UPN/URLs menus and other CPI related information collected by each department is maintained within a local UPN/URL Database 202 on the department's client machine 13, and is periodically transmitted to a Manufacturer's UPN/URL Database 203 hosted on the network Internet server 133 In addition to providing the client machine behind the corporate firewall with http, e-mail and ftp services, the network Internet server 133 is also equipped with an EDI (e.g. EDI or XML/ICE) software solution which enables periodic uploading of the manufacturer's UPN/URL Database 203 to the Central UPN/URL Database Management Subsystem 9, shown in FIG. 2C

Detailed Description Text (257):
Another arrangement, each manufacturer-operated client machine 13 would be assigned the task of managing the UPN/URLs associated with a particular department of the manufacturer (e.g. engineering department, sales department, service/support department, marketing department, advertising department, etc.). The UPN/URLs menus and other CPI related information collected by each department is maintained within a local UPN/URL Database 202 on the department's client machine 13, and is periodically transmitted directly to the Central UPN/URL Database Management Subsystem 9, shown in FIG. 2C. In such an alternative embodiment of the present invention, the network Internet server 133 would provide each client machine behind the corporate firewall with http, e-mail and ftp services in a conventional manner, but not maintain a central manufacturer's UPN/URL database 202.

Detailed Description Text (258):
The primary advantage of the above described techniques for distributed UPN/URL management hereof is that such techniques provide manufacturers with a revolutionary way of am and means for enlisting the different departments within the organization, having different business perspectives, goal and resources, to create "up-to-date" links between UPN's on their consumer products and the diverse types of consumer related information resources published on the Internet, all in concerted effort to achieve the sales, marketing and support programs of the company in a unified manner. Using the system and method of the present invention,

symbolic links between the manufacturer' products and published information resources on the Internet (e.g. WWW) can be impressed upon the minds of consumers as they seek access to such current information at home, in the office, in physical and electronic stores, as well as on the road.

Detailed Description Text (261):
As indicated at Block A in FIG. 6B, when selected from the user-interface of a bar-code driven IPI Website, the second Check Box type button 21B automatically activates the Manufacturer Website Search Mode of the IPI Finding and Serving Subsystem by sending an HTTP request to the IPD Server(s) 11" based on a URL hot-linked to the selected Check Box.

Detailed Description Text (262):
As indicated at Block B in FIG. 6B, this causes a particular type of HTML-encoded document (i.e. called an "HTML form" or "Web form document") residing on the IPD Server(s) 11" to be sent to the Web browser of the requesting client subsystem 13 and displayed on the information display frame 20C thereof (requesting this mode of service). As in the Manufacturer Website Search Mode described above, the HTML form sent in the Manufacturer Website Search Mode may also use any HTML format commands, such as headers, paragraphs, and lists, but must include three unique items, namely: the METHOD by which the user input is to be sent; the ACTION, which specifies a URL to which the user input is to be sent, presumably, the IPD Server 11" that will act upon the request appropriately; and a SUBMIT button, to send the completed form over the Internet via HTTP. In the illustrative embodiment, user input (i.e. a UPC or EAN number associated with a particular consumer product) is obtained by an Input Box, which allows the user (i.e. retail sales clerk or consumer) to type in or scan in a UPC or EAN number assigned to a consumer product on which product related information is sought.

Detailed Description Text (263):
As indicated at Block C in FIG. 6B, the consumer or retail clerk scans the bar coded consumer product, or enters the UPC or EAN number thereon into the Input Box of the HTML form, and selects the SUBMIT button thereon. In response thereto, the Web browser on the client subsystem 13 sends a GET request to the IPD server 11B" shown in FIG. 2B2. When selecting the SUBMIT button on the HTML form, the Web browser executes the METHOD associated with the HTML form and sends the stored UPC (or EAN) value to the URL specified by ACTION associated with the HTML form (i.e. the Web browser performs the action specified in the ACTION). The ACTION of the HTML form specifies the URL of the CGI script within the http server 11" that will process the request from the HTML form. This amounts to the Web browser constructing a GET request for that URL, with the arguments (the query string) being attached to the end of the URL. The arguments of the HTML form are specified by the INPUT items of the HTML form (i.e. the UPC or EAN number on the consumer product on which information is sought).

Detailed Description Text (264):
In general, the HTTP and HTML protocols provide three ways to pass the input (e.g. UPC or EAN number) from the users to CGI scripts on the IPD Server 11 (i.e. HTTP Server). All three CGI scripts accomplish the same thing: they allow the Web browser to pass information to the IPD Server 11".

Detailed Description Text (265):
As indicated at Block D in FIG. 6C, the HTTP (httpd) program on IPD server 11" passing the arguments (the UPC or EAN numbers in the query string) to the CGI script thereon and the CGI script translates the query string into a proper query for use in searching the RDBMS 9 shown in FIG. 2B2.

Detailed Description Text (266):
As indicated at Block E in FIG. 6C, the translated query is used to search the RDBMS 9 in order to find the set of URLs pointing to HTML documents (i.e. Web

Pages) published on the Internet and containing information relating to the consumer product having the input UPC or EAN number. The result returned from the RDBMS 9 is an ASCII record specifying the set of URLs pointing to HTML documents published on the Internet and containing information relating to the consumer product having the input UPC or EAN number entered into the HTML form. In order for the Web browser of the requesting client subsystem to display the results of the database search using the UPC or EAN input, the ASCII record must be converted into a HTML document (i.e. output HTML form). As indicated at Block F in FIG. 6B, the IPD Server 11" creates the elements of an output HTML form (Web output form), inserts the result from the RDBMS 11" into the output form, and sets the Content-type to be text/html. The CGI script may translate, filter, augment and reformat the result from the database search in any way so long as the result is an HTML document or some format that the Web browser of the client subsystem can display.

Detailed Description Text (267):
As indicated at Block G, the menu of URLs retrieved from the database search is displayed in the Web output form. At Block H, the consumer or retail sales clerk can link to a desired consumer product related information resource (HTML document) by selecting from the information menu, the URL anchored to the information resource in the displayed information menu.

Detailed Description Text (270):
As indicated at Block A in FIG. 6C, when selected from the user-interface of an IPI Website, the third Check Box type button 21C automatically activates the UPN-Directed Information Access Mode of the IPI Finding and Serving Subsystem by sending an HTTP request to the IPD Server(s) 11 based on a URL hot-linked to the selected Check Box.

Detailed Description Text (271):
As indicated at Block B in FIG. 6C, this causes a particular type of HTML-encoded document (i.e. called an "HTML form" or "Web form document") residing on the IPD Server(s) 11" to be sent to the Web browser of the requesting client subsystem 13 and displayed on the information display frame 20C thereof (requesting this mode of service). As in the Manufacturer Website Search Mode described above, the HTML form sent in the UPN-Directed Information Access Mode may also use any HTML format commands, such as headers, paragraphs, and lists, but must include three unique items, namely: the METHOD by which the user input is to be sent; the ACTION, which specifies a URL to which the user input is to be sent, presumably, IPD Server 11' that will act upon the request appropriately; and a SUBMIT button, to send the completed form over the Internet via HTTP. In the illustrative embodiment, user input (i.e. a UPC or EAN number associated with a particular consumer product) is obtained by an Input Box, which allows the user (i.e. retail sales clerk or consumer) to type in or scan in a UPC or EAN number assigned to a consumer product on which product related information is sought.

Detailed Description Text (272):
As indicated at Block C in FIG. 6C, the consumer or retail clerk scans the bar coded consumer product, or enters the UPC or EAN number thereon into the Input Box of the HTML form, and selects the SUBMIT button thereon. In response thereto, the Web browser on the client subsystem 13 sends a GET request to the IPD Server 11" shown in FIG. 2B2. When selecting the SUBMIT button on the HTML form, the Web browser executes the METHOD associated with the HTML form and sends the stored UPC (or EAN) value to the URL specified by ACTION associated with the HTML form (i.e. the Web browser performs the action specified in the ACTION). The ACTION of the HTML form specifies the URL of the IPD SERVER 11 that will process the request from the HTML form. This amounts to the Web browser constructing a GET request for that URL, with the arguments (the query string) being attached to the end of the URL. The arguments of the HTML form are specified by the INPUT items of the HTML form (i.e. the UPC or EAN number on the consumer product on which information is sought).

Detailed Description Text (273):
As indicated at Block D, the IPD server 11" passes the arguments (the UPC or EAN numbers in the query string) to a CGI script running therewithin which translates the Web query string into a proper query to the RDBMS 9 shown in FIG. 2B1.

Detailed Description Text (274):
As indicated at Block E, the translated query is used to search the RDBMS IIA and find the set of URLs (i) linked to the registered consumer product (by the manufacturer or agent thereof) assigned the UPC or EAN number entered into the Input Box of the HTML form, and (ii) pointing to HTML documents on the WWW containing particular types of consumer product related information. The result returned from the RDBMS 9 is an ASCII record specifying the set of URLs satisfying the above criteria. In order for the Web browser of the requesting client subsystem to display the results of the database search during this mode, the ASCII record must be converted into a HTML document (i.e. Web output form).

Detailed Description Text (275):
As indicated at Block F, a CGI script within IPD server 11" creates the elements of an HTML document (Web output form), inserts the result from the RDBMS 9 into the Web output form, and sets the Content-type of this HTML document to text/html. In the illustrative embodiment, when the Web output form is displayed by the requesting client subsystem, a set of URLs categorized by particular product information types is displayed on the information display frame 20C. Notably, this set of URLs points to particular types of consumer product related information registered within the RDBMS 9 of the system.

Detailed Description Text (276):
As indicated at Block G, the consumer or retail sales clerk can then access and display any HTML document (Web page) located at a particular URL within the information menu by selecting the same using atouch screen, mouse, or other input selection device.

Detailed Description Text (279):
As indicated at Block A in FIG. 6DI, when selected from the user-interface of an IPI Website, the fourth Check Box type button 21D automatically activates the Trademark-Directed Search Mode of the IPI Finding and Serving Subsystem by sending an HTTP request to the IPD Server(s) 11" based on a URL hot-linked to the selected Check Box.

Detailed Description Text (280):
As indicated at Block B in FIG. 6D1, this causes a particular type of HTML-encoded document (i.e. called an "HTML form" or "Web input form document") residing on the IPD Server(s) 11" to be sent to the Web browser of the requesting client subsystem 13 and displayed on the information display frame 21C thereof (requesting this mode of service). As in the UPN-Directed Information Access Mode described above, the HTML form sent in the Trademark-Directed Search Mode may also use any HTML format commands, such as headers, paragraphs, and lists, but must include three unique items, namely: the METHOD by which the user input is to be sent; the ACTION, which specifies a URL to which the user input is to be sent, (e.g. a CGI script running within http server 11" that will act upon the request appropriately); and a SUBMIT button, to send the completed form over the Internet via HTTP. In the illustrative embodiment, user input (i.e. the trademark or tradename used with a particular consumer product on which information is sought) is obtained by an Input Box, which allows the user (i.e. retail sales clerk or consumer) to type in the trademark or tradename believed or otherwise known to be used in connection with a particular consumer product on which information is sought.

Detailed Description Text (281):
As indicated at Block C in FIG. 6D1, the consumer or retail clerk enters the

trademark or tradename into the Input Box of the HTML form, and selects the SUBMIT button thereon. In response thereto, the Web browser on the client subsystem 13 sends a GET request to the IPD server 11" shown in FIG. 2B2. When selecting the SUBMIT button on the HTML form, the Web browser executes the METHOD associated with the HTML form and sends the stored trademark value to the URL specified by ACTION associated with the HTML form (i.e. the Web browser performs the action specified in the ACTION). The ACTION of the HTML form specifies the URL of the CGI script running within the IPD server 11" that will process the request from the HTML form. This amounts to the Web browser constructing a GET request for that URL, with the arguments (the query string) being attached to the end of the URL. The arguments of the HTML form are specified by the INPUT items of the HTML form (i.e. the trademark or tradename used in connection with the consumer product on which information is sought).

Detailed Description Text (284):
At Block F in FIG. 6D2, a CGI script within IPD server 11" creates the elements of another HTML document (Web auxiliary input form), inserts the preliminary search result from the RDBMS 9 into the Web auxiliary input form, and sets the Content-type of this HTML document to text/html. In the illustrative embodiment, the Web auxiliary-input form has an ACTION which specifies the URL of a CGI script within the IPD server 11" that will act upon the request appropriately as if the system were in the UPN-Directed Information Access Mode. The Web auxiliary input form includes an Input Box listing all triplet data sets (i.e. Product Description, Manufacturers and UPN number) satisfying the input trademark search criteria entered in the primary Web input document, described hereinabove. The qualifying triplets listed in the Input Box are provided with a Radio-Button to allow the consumer or retail sales clerk to select one of the triplets from the list thereof for use in a subsequent refined search of the RDBMS 9. The Web auxiliary-input form also has a SUBMIT button for sending the HTML form back to the IPD server 11" for processing.

Detailed Description Text (287):
At Block I in FIG. 6D2, the query is used to search the RDBMS 9 in order to find the set of URLs (i) related to the registered consumer product (by the manufacturer or agent thereof) assigned the UPN, (Product Description and Manufacturer) entered into the Input Box of the HTML (auxiliary) form, and (ii) pointing to HTML (or FTP) documents on the WWW containing particular types of consumer product related information. The result returned from the RDBMS 9 is an ASCII record specifying the set of URLs satisfying the above criteria. In order for the Web browser of the requesting client subsystem to display the results of the database search during this mode, the ASCII record must be converted into an HTML document (i.e. Web output form).

Detailed Description Text (289):
At Block K in FIG. 6D3, the set of URLs categorized by particular product information types is displayed within the output HTML form on the information display frame 20C. Notably, this set of URLs points to particular types of consumer product related information registered within the RDBMS 9 of the system by the manufacturer of the product or its agent(s) thereof using the UPN/URL management tools accessible during the Manufacturer/Product Registration Mode hereof.

Detailed Description Text (290):
As indicated at Block L in FIG. 6D3, the consumer or retail sales clerk can access and display any HTML document (Web page) located at a particular URL within the displayed information menu by selecting the same using a touch screen, mouse, or other input selection device available at the requesting client subsystem 13.

Detailed Description Text (293):
As indicated at Block A in FIG. 6E1, when selected from the user-interface of an IPI Website, the fifth Check Box type button 21E automatically activates the

Product-Description Directed Search Mode of the IP[illegible]inding and Serving Subsystem by sending an HTTP request to the IPD Server(s) 11" based on a URL hot-linked to the selected Check Box.

Detailed Description Text (294):
As indicated at Block B in FIG. 6E1, this causes a particular type of HTML-encoded document (i.e. called an "HTML form" or "Web input form document") residing on the IPD Server(s) 11" to be sent to the Web browser of the requesting client subsystem 13 and displayed on the information display frame 21C thereof (requesting this mode of service). As in the Trademark-Directed Search Mode described above, the HTML form sent in the Product-Description Directed Search Mode may also use any HTML format commands, such as headers, paragraphs, and lists, but must include three unique items, namely: the METHOD by which the user input is to be sent; the ACTION, which specifies a URL to which the user input is to be sent, (e.g. a CGI script running within the IPD server 11" that will act upon the request appropriately); and a SUBMIT button, to send the completed form over the Internet via HTTP. In the illustrative embodiment, user input (i.e. the description or descriptor for a particular consumer product on which information is sought) is obtained by an Input Box, which allows the user (i.e. retail sales clerk or consumer) to type in the product description for a particular consumer product on which information is sought.

Detailed Description Text (295):
As indicated at Block C in FIG. 6E1, the consumer or retail clerk enters the product description into the Input Box of the HTML form, and selects the SUBMIT button thereon. In response thereto, the Web browser on the client subsystem 13 sends a GET request to the IPD server 11". When selecting the SUBMIT button on the HTML form, the Web browser executes the METHOD associated with the HTML form and sends the stored product description to the URL specified by ACTION associated with the HTML form (i.e. the Web browser performs the action specified in the ACTION). The ACTION of the HTML form specifies the URL of a CGI script within the IPD server 11" that will process the request from the HTML form. This amounts to the Web browser constructing a GET request for that URL, with the arguments (the query string) being attached to the end of the URL. The arguments of the HTML form are specified by the INPUT items of the HTML form (i.e. the product description for the consumer product on which information is sought).

Detailed Description Text (298):
At Block F in FIG. 6E2, the IPD server 11" creates the elements of another HTML document (Web auxiliary input form), inserts the preliminary search result from the RDBMS 9 into the Web auxiliary input form, and sets the Content-type of this HTML document to text/html. In the illustrative embodiment, the Web auxiliary-input form has an ACTION which specifies the URL of a CGI script within IPD server 11" that will act upon the request appropriately as if the system were in the UPN-Directed Information Access Mode. The Web auxiliary input form includes an Input Box listing all triplet data sets (i.e. Trademark, Manufacturer, and UPN number) satisfying the input product-description search criteria entered in the primary Web input document, described hereinabove. The qualifying triplets listed in the Input Box are provided with a Radio-Button to allow the consumer or retail sales clerk to select one of the triplets from the list thereof for use in a subsequent refined search of the RDBMS 9. The Web auxiliary-input form also has a SUBMIT button for sending the HTML form back to the IPD server 11" for processing.

Detailed Description Text (301):
At Block I in FIG. 6E2, the query is used to search the RDBMS 9 in order to find the set of URLs (i) linked to the registered consumer product (by the manufacturer or agent thereof) assigned the UPN, (Trademark and Manufacturer) entered into the Input Box of the HTML (auxiliary) form, and (ii) pointing to HTML (or FTP) documents on the WWW containing particular types of consumer product related information. The result returned from the RDBMS 9 is an ASCII record specifying the

set of URLs satisfying the above search criteria. In order for the Web browser of the requesting client subsystem to display the results of the database search during this mode, the ASCII record must be converted into a HTML document (i.e. output HTML form).

Detailed Description Text (303):
At Block K in FIG. 6E3, the set of URLs categorized by particular product information types is displayed within the output HTML form on the information display frame 20C. Notably, this set of URLs points to particular types of consumer product related information registered within the RDBMS 9 of the system by the manufacturer of the product or its agent(s) thereof using the UPN/URL management tools accessible during the Manufacturer/Product Registration Mode hereof.

Detailed Description Text (304):
As indicated at Block L in FIG. 6E3, the consumer or retail sales clerk can access and display any HTML document (Web page) located at a particular URL within the displayed information menu by selecting the same using a touch screen, mouse, or other input selection device available at the requesting client subsystem 13.

Detailed Description Text (307):
As illustrated in FIGS. 4F1, 4F2, 4H1, 4H2, 4J1, 4J2, 4L1 and 4L2, a centralized Library of CPIR-enabling Applets/Servlets is created, management and stored within the UPN/URL Database Management Subsystem 9 hereof in accordance with the above-described methods. In accordance with the principles of the present invention, these CPIR-enabling Applets/Servlets must be widely distributed to retailers, manufacturers, advertisers and others about the globe and thereafter widely embedded within HTML-encoded documents, as taught in detail hereinabove, to practice this aspect of the present invention in a commercially successful manner. The function of the CPIR-enabling Applet Download/Distribution mode of operation of the system is to enable the world-wide distribution of this centralized Library of CPIR-enabling Applets/Servlets, in accordance with the licensing program associated with each such CPIR-enabling Applet.

Detailed Description Text (308):
As shown in FIG. 3C, the CPIR-enabling Applet Download/Distribution mode is automatically initiated by the user depressing mode control button 21F displayed on the control panel 20B of the UPC Request (Central or Retail) GUI of the illustrative embodiment, but certainly elsewhere in practice. The user can be anyone with the requisite authority to use the Applets in accordance with the terms of the licensing program to be enforced in connection therewith. Understandably, the terms of such licensing programs will be based on prevailing business conditions and will vary from embodiment to embodiment of the present invention.

Detailed Description Text (309):
As best illustrated in FIG. 4F2, upon entering the UPC-Encoded-Applet-Download/Distribution mode, the IPD server 11 of the illustrative embodiment will serve a custom Java GUI as shown in FIGS. 4M1 and 4M2, for carrying out Applet tag downloading and licensing procedures. The GUI will provide (1) links to the centralized Library of CPIR-Enabling Applets/Servlets maintained within the UPN/URL Database Management Subsystem 9, as well as (2) launchable GUIs for downloading selected UPN-identifiable CPIR-enabling Applets to specified Internet-enabled client computer subsystems 13 or Internet information/application servers operated by the user interfacing with this mode of system operation. Notably, electronic data interchange/exchange processes (e.g. based on EDI, XML/ICE or other protocols) can be used to carry out the downloading of CPIR-enabling Applets and other files between client computers and the IPD server 11 during this and other modes of operation.

Detailed Description Text (313):
Once the CPIR-enabling Applet has been embedded within the target HTML-encoded

documents, the HTML encoded can then be published [illegible] its intended publishing environment so that consumers can instantly initiate UPN-directed searches within the centralized UPN/URL Database Management Subsystem 9 hereof by clicking on the CPIR-enabling Applet, and thereafter display the search results within an independent Java GUI which performs the function of a "cyber-kiosk" provided at the consumer's point of presence on the WWW.

Detailed Description Text (319):
When the Check Box button 21C is selected from the control frame 20B, the IPI Finding and Serving Subsystem enters its "UPN-Directed Information Access Mode" illustrated in FIG. 6C. Preferably, the user is provided with a choice of language (e.g. English, German, French, Japanese, Korean, Russian, Chinese, etc.) by way of an appropriate menu-selection screen. After the desired language selection is made, the home page is displayed upon the client subsystem's display screen. A typical display screen produced from the IPD Server might read as follows: "Welcome to UPC-REQUES.TM., the only Universal Product-Information Finding and Serving System on the Internet. Have you purchased a particular product, are you considering the purchase of a particular product, on which you would like current, up-to-date information from the manufacturer or advertiser? Look no further than the UPC-REQUESTTM Universal Product-Information Finding and Serving System."

Detailed Description Text (320):
When the subsystem is in its "UPN-Directed Information Access Mode", a Web-based information resource pertaining to any commercial product registered with the system can be displayed and selected by the user in order to automatically access the same from the Internet. Such information resources can include advertisements, specifications, operation descriptions, product simulations, purchase information, maintenance information, warranty and servicing information, product updates, distributor/reseller information, incentives (e.g. discounts, rebates, coupons, etc.), electronic data transaction screens, etc. In this mode, desired product information is obtained by simply entering the registered product's UPN (e.g. its UPC's 12 digit numerical string) into the Inout Box of the HTML form displayed in the information display frame 20C. Such data entry can be carried out manually using a keyboard data entry techniques, or automatically using a bar code symbol reader connected to the client subsystem as discussed in detail above. When using the seeded IPI Database described hereinabove, only the first six digits of the UPC number need be entered into the dialogue box. An exemplary display screen produced from the IPD Server might be as follows: "Simply enter the 12 digit UPC the particular product; click REQUEST, and then wait for the display of the list of Web locators (URLs) at which the desired product information can be found on the Internet?"

Detailed Description Text (321):
In response to such data entry operations, a list or menu of URLs organized according to information subfield classifications as set forth, for example, in FIG. 4A2, are displayed on client subsystem Ca making the request of the IPD Server 11. At this stage, another display screen associated with the HTML form produced from the IPD Server 11 would appear with an exemplary message as follows: "Please select the URL from the displayed URL Menu using the information subfield product information category displayed above. This will connect you to the product information related to the selected URL. You can return to the URL display list at anytime."

Detailed Description Text (322):
Upon selecting a particular URL from the displayed URL menu, video and audio information content are automatically served from the IPI Server 12 hosting the selected URL and thereafter displayed on the client subsystem 13.

Detailed Description Text (324):
When the system is in its Trademark-Directed Search Mode, a predesignated

information resource pertaining to any commercial product registered with the system can be automatically accessed from the Internet and displayed from the Internet browser of a client subsystem 13. Such information resources can include advertisements, specifications, operation descriptions, product simulations, product upgrade information, purchase information, maintenance information, warranty and servicing information, etc. In this mode, desired product information is obtained by simply entering the registered product's trademark(s) and/or associated company name into the Input Box of the HTML form displayed on the information display frame 20C of the client subsystem. An exemplary message associated with the HTML form produced from the IPD Server 11 might be as follows: "Simply enter the trademark used in connection with the particular product and/or the company name of the product's manufacturer; click REQUEST, and then wait for the display of a list of Web locators (URLs) at which desired types of product information can be found on the Internet"

Detailed Description Text (325):
In response to such data entry operations, a list of URLs organized according to the information subfield classifications set forth in FIG. 4A2 are displayed on client subsystem placing the request. Upon selecting a particular URL from the displayed list thereof, video and audio information content are automatically served from the IPI Server hosting the selected URL and thereafter displayed on the client subsystem.

Detailed Description Text (326):
In an alternative embodiment of the present invention, the UPN-Directed Information Access Mode and the Trademark-Directed Search Mode can be integrated into a single server application so that there is noneed or desire to manually select between mode activation buttons 21C and 21D, respectively. In such an embodiment, the interaction between the IPD Server and the requesting client subsystem can be designed to support the following Web server display screens and script underlying the same: "Welcome to UPC-REQUES.TM., the only Universal Product-Information Finding and Serving System on the Internet. Have you purchased a particular product, or considering the purchase of a particular product, on which you would like current, up-to-date information from the manufacturer or advertiser? "Look no further than the UPC-REQUES.TM. Universal Product Information Finding and Serving System." "Simply enter the 12 digit UPC number of the particular product, click REQUEST, and select from the displayed menu of Web locators (URLs) to find the desired product information on the WWW. "If you donot know the UPC number associated with the product you are looking for, then simply enter the trademark used in connection with the particular product and/or the company name of the manufacturer, then click REQUEST,and wait for the display of the list of Web locators (URLs) at which the desired product information can be found. "Please select the URL from the displayed URL list by clicking on it. This will connect you to the product information related to the selected URL. You can return to the URL display list at anytime."

Detailed Description Text (328):
In instances when an IPI Website in accordance with the present invention is being served to consumers in retail environments using a computer-based kiosk as shown in FIG. 3A2, the consumer as well as retail sales clerk is presented with the option of ascertaining the price of an product in the store. This is achieved by simply depressing the "Price Display" button 21F on Control Strip 20B, shown in FIG. 3C, to engage the system in its price lookup/display mode. In this mode of operation, the consumer then need only scan the UPC bar code symbol on the product using bar code scanner 26 in order for the price to be looked-up in the Product Price Database maintained in the Retailer's Price Server (RPS) 35, and displayed on the kiosk display screen. In general, the Product Price Database of the hosting retailer can be made accessible by the computer-based kiosk in several possible ways. As shown in FIGS. 2-1 and 2-2, one way is to place the retailer's RPS on Internet (by using an HTTP server) and connect the RPS to the IPD Server 11 of the

system by way of a CGI well known in the art. The [redacted] can be made accessible only by authorized client subsystems (e.g. computer-based kiosks installed in the hosting retailer's store and possibly administrators of the information delivery system). An alternative technique of connecting the Product Price Database to each computer-based kiosk would involve providing the RPS with a direct interface to each computer-based kiosk in the hosting o retailer's store(s). This alternative technique may require the use of computer networking technology well known in the art.

Detailed Description Text (331):
According to the best mode embodiment, the IPI Finding and Serving Subsystem 2, referred to hereinabove as the "UPC REQUES.TM. Consumer Product Information Finding System" in FIGS. 7 and 8 hereof, comprises an integration of several subsystems including, for example: the UPC REQUEST.TM. Manufacturer/Product Registration Subsystem 33 (e.g. Web Document Server 30 and Workstation 31) including Web-based and Value Added Networks (VAN)-based infrastructure and processes 14 for supporting EDI and UPN/URL database management operations by manufacturers and/or their agents; the UPC REQUEST.TM. Database Management Subsystem 9 interfaced with the UPC REQUEST.TM. Manufacturer/Product Registration Subsystem 33; numerous UPC REQUEST.TM. kiosks (e.g. client subsystems 13) installed in retail stores, retail outlets and the like, each having a bar code symbol driven Internet browser providing access to the Internet through an Internet Service Provider (ISP); and all of the Web-enabled client subsystems 13 located in consumer homes, in consumer offices and on the road, having access to the Internet through an ISP. While distributed geographically, these subsystems are integrated through the infrastructure of the Internet.

Detailed Description Text (332):
The function of the UPC REQUEST.TM. Manufacturer/Product Registration Subsystem 33 is two-fold: (1) to enable qualified manufacturers to quickly and easily register their companies with the System (i.e. the UPC REQUEST.TM. Database Management Subsystem 9) by way of a Web-enabled computer system of their choice; and (2) to enable manufacturers and/or their agents to (i) easily link, manage and update their UPC numbers and linked URLs using any Web-enabled computer system 13 running the EDI (or XML/EDI) based UPN/URL Database Management software (downloaded during manufacturer registration), and periodically transmit such updated information to the UPC REQUEST.TM. Database Management Subsystem in order to update each manufacturer's information within the UPC REQUES.TM. Database (i.e., IPI Database shown in FIGS. 4A1 and 4A2).

Detailed Description Text (333):
The function of the UPC REQUEST.TM. Database Management Subsystem 9 is to maintain and update the UPC REQUEST.TM. Database (shown in FIGS. 4A1, 4A2 and FIGS. 4C through 4C4), which contains various information items regarding registered manufacturers, service-subscribing retailers, and registered consumer products including, for example, UPC (and/or UPC/EAN) numbers assigned to consumer products and linked URLs pointing to published HTTP-encoded documents (i.e. Web pages) containing particular types of information related to such products.

Detailed Description Text (334):
Within the store of each retailer subscribing to the UPC REQUES.TM. Consumer Information Service, the function of the UPC REQUESTrm kiosk is to provide consumer access to the UPC REQUEST.TM. Retailer Website (e.g. UPC REQUEST.TM. Retail @Wal-Mart, UPC REQUEST.TM. Retail @Home Depot, etc.). The UPC REQUEST.TM. Retailer Website served to both physical-kiosk and cyber-kiosks within the retailer's brick and mortar and EC stores, respectively, provides consumer access to UPN/URL information links relating only to those products sold by the retailer and maintained within the UPC REQUES.TM. Database Management System by the manufacturer or agent thereof. If desired by the subscribing retailer, its UPC REQUEST.TM. Retailer Website can be freely served to customers over the Internet, e.g.

accessible from a hot-link embedded somewhere in the retailer's Web-site.

Detailed Description Text (335):
Within the realm of the UPC REQUEST.TM. System 2, the function of the Web-enabled client computer system 13 of each consumer, wherever it may be located (e.g. at home, in the office or on the road), is to provide consumer access the UPC REQUES.TM. Central Website which is freely served over the Internet to any consumer having a Web-enabled computer system. Unlike each UPC REQUEST.TM. Retailer Website maintained by the UPC REQUEST.TM. Database Management System, the UPC REQUEST.TM. Central Website provides consumer access to UPN/URL information links relating to every product maintained within the UPC REQUEST.TM. Database Management System by every registered manufacturer. Any attempt by a consumer to access information from a particular UPC REQUEST.TM. Retailer Website regarding a product not sold in the retailer's store will automatically result in a link over to the UPC REQUEST.TM. Central Website.

Detailed Description Text (336):
A Brief Description of the UPC RFQITFST.TM. Information Service Suit

Detailed Description Text (337):
When installed in retail stores, the UPC REQUEST.TM. System provide will provide six revolutionary Internet-based consumer information services under the servicemarks HOME-PAGE.TM., INFO-LINK.TM., CYBER-SERVICE.TM., TRADE-MARK.TM., PRODUCT-TYPE.TM., and UPC-ENCODED-APPLET-DOWNLOAD.TM., respectively. Each of these information services is accessible to consumers and sales clerks alike from a UPC REQUESTrm Retailer Website (e.g. UPC REQUEST.TM.@Home Depot Website) accessed within a retail store, as well as from on the UPC REQUES.TM. Central Website.

Detailed Description Text (338):
In the UPC REQUEST.TM. version of the IPI Finding and Serving Subsystem of the present invention, the INFO-LINK.TM. provision is supported during and enabled by Manufacturer/Product Registration Mode; the HOME-PAGE.TM. provision is supported during and enabled by the Manufacturer Website Search Mode; the CYBER-SERVICE.TM. provision is supported during and enabled by UPN-Directed Information Access Mode; TRADE-MARK.TM. provision is supported during and enabled by the Trademark-Directed Search Mode; PRODUCT-TYPE.TM. provision is supported during and enabled by the Product-Description Directed Search Mode; and UPC-ENCODED-APPLET-TAG-DOWNLOAD/DISTRIBUTE.TM., provision is supported during and enabled by the UPC-Encoded Applet Tag Download/Distribution Mode. Each of these system modes have been described in great detail hereinabove.

Detailed Description Text (339):
To constantly remind the public at large of the "fee-paying" sponsors of the UPC REQUES.TM. System, all Web pages displayed by the UPC REQUES.TM. System in a retail store (e.g. on UPC REQUEST.TM. @Home Depot Website), or on the UPC REQUEST.TM. Central Website, will be displayed within athree-frame display "framework" comprising a sponsor frame, a control frame, and an information frame.

Detailed Description Text (340):
The "sponsor frame", located on the upper-most portion of the Internet browser screen, displays the sponsor's greeting such as, for example, "Welcome to UPC REQUEST, sponsored by Visa and Federal Express."

Detailed Description Text (341):
The "control frame", located on the left-most side of the Internet browser screen, will provide six mode activation buttons. The first mode activation button 21A enables consumers to request the INFO-LINK.TM. service. The second mode activation button 21B enables consumers to request the HOME-PAGE.TM. service. The third mode activation button 21C enables consumers to request CYBER-SERVICE. The fourth mode activation button 21D enables consumers to request TRADE-MARK.TM.. The fifth mode

activation button 21E enables consumers to request PRODUCT-TYPE.TM.. The sixth mode activation button 21F enables consumers to request UPC-ENCODED-APPLET-DOWNLOAD/DISTRIBUTETM. A seventh button 21G enables the download a free plug-in software module which automatically installs a "Product Information" button on the graphical user interface of the consumer's Internet browser, so that the UPC REQUESTM Central Website can be accessed anywhere in the world with a single click of the mouse button.

Detailed Description Text (342):
The "information frame", occupying the balance of the Internet browser screen, will display: all HTTP (i.e. Web) and FTP pages launched by in-store scanning of UPC-labeled products during HOME-PAGE.TM. or CYBER-SERVICE.TM.; all HTTP and FTP pages launched by clicking on hypertext-links embedded within Web pages accessed through a particular UPC REQUES.TM. Retailer Website in retail stores or from the UPC REQUESTrm Central Website; as well as all information search and display (menu) screens served by a UPC REQUES.TM. Retailer Website to the UPC REQUEST.TM. Central Website.

Detailed Description Text (343):
In retail stores subscribing to the UPC REQUES.TM. System, HOMEPAGE.TM. manufacturer's Website search site will enable consumers to automatically access the WWW Home Page of any registered manufacturer by scanning the UPC (or UPC/EAN) bar code symbol on any product thereof using the bar code symbol reader associated with a UPC REQUEST.TM. kiosk. In general, the UPC REQUEST.TM. kiosk can be realized by any Web-enabled computer system 13 having an Internet browser program, on-line access to the UPC REQUEST.TM. Retailer Website, and optionally atouch-screen display panel. The UPC REQUEST.TM. kiosk may, however, be realized as an inexpensive Internet access terminal comprising a Web-enabled network computer (NC), an LCD touch-screen panel, and a laser scanning bar code symbol reader integrated within an ultra-compact housing that is mountable within diverse locations within retail stores. As shown in FIG. 3A5, the UPC REQUEST.TM. kiosk may also be integrated within a conventional Point Of Sale (POS) station having a laser canning bar code symbol reader and a large rotatable LCD display panel. Being as easy to install as atelephone modem, UPC REQUEST.TM. kiosks of this design can be widely deployed throughout retail stores world-wide with minimal modifications to the preexisting information infrastructure.

Detailed Description Text (344):
At home, in the office, or on the road, HOME-PAGE.TM. enables consumers to automatically access the WWW Home Page of any registered manufacturer by entering the UPN (or UPC/EAN number) on any product into the search screen served up by a particular UPC REQUEST.TM. Retailer Website, or by the UPC REQUEST.TM. Central Website.

Detailed Description Text (345):
INFO-LINK.TM., carried out using EDI (or XML/EDI) based UPN/URL Database Management software (downloaded from Manufacturer/Product Registration Subsystem 33), enables manufacturers to simply relate (link), manage and update therein (i) the UPN (or UPC/EAN number) on any product with (ii) the Internet address (i.e. URL) of product-related Web pages published on the Internet by the manufacturer, its agents, or others, for subsequent access and display by consumers using CYBER-SERVICE.TM.. While the INFO-LINK.TM. service would be made accessible through UPC REQUEST.TM. kiosks 13 in retail stores (i.e. for the sake of vendors who frequent the same), the actual UPN/URL information linking and management operations associated with the INFO-LINK.TM. service will typically occur in the "back-offices" of registered manufacturers using Internet-enabled computer systems accessing INFO-LINK.TM. through a hot-linked URL posted on the UPC REQUEST.TM. Retailer Website and/or the UPC REQUESTTM Central Website.

Detailed Description Text (346):

UPC-ENCODED-APPL[redacted]DOWNLOAD.TM., carried out usi[redacted]DI (or XML/EDI) based processes, enables manufacturers (viathe system administrator) to distribute CPIR-enabling Applets/Servlets to retailers, manufacturers, advertisers and others about the globe so that they may embed the same within HTML-encoded documents in order that consumers can instantly initiate single mouse-click UPN-directed, Trademark-directed and/or Product-Descriptor-directed CPI searches within the centralized UPN/URL Database Management Subsystem 9 hereof and display the search results within a CPID-enabling Java GUI which performs the function of a "cyber-kiosk" provided at the consumer's point of presence on the WWW. In the context of the illustrative embodiment of the system of the present invention, such single mouse-click initiated CPI searches solve a major fear of most retailers in both Physical and Cyber Space retail environments, namely: getting a customer into their store, and then having them step out to get some more advice, information or endorsement before making a purchase, or worse yet, never returning to make a purchase, and instead shopping elsewhere for the sought after product.

Detailed Description Text (347):
CYBER-SERVICE.TM., accessible through a particular UPC REQUES.TM. Retail Website or the UPC REQUEST.TM. Central Website, enables consumers at home, in the office, on the road, and in retail stores, to quickly access particular types of product-related information which have been published on the WWW by registered manufacturers, their agents and others about consumer products registered with the UPC REQUES.TM. Database Management System. CYBER-SERVICET.TM. displays such product-related information in a menu-like format organized by particular information types (e.g., Product Advertisements, Product Endorsements, Product Reviews, Product Rebates and Incentives, Product Description, Product Manual/Instructions, Product Updates (at FTP Sites), Product Returns, Warranty and Repair Service, Direct Product Purchase, Retailers, Wholesalers, Complementary Products, Company Annual Report, Stock Purchase, etc.). Each displayed information menu associated with a consumer product contains hyper-linked URLs pointing to HTML-documents containing particular types of product-related information linked to the product by the manufacturer or its agent.

Detailed Description Text (348):
When CYBER-SERVICE.TM. is selected from a particular UPC REQUEST.TM. Retail Website, each product-related Web page listed in the displayed "information menu" can be accessed and displayed simply by touching the corresponding Internet address (i.e. URL) displayed on the touch-screen display panel of the UPC REQUES.TM. kiosk in the retail store. When CYBER-SERVICE.TM. is selected from the UPC REQUEST.TM. Central Website, each product-related Web page listed in the displayed "information menu" can be accessed and displayed simply by clicking the display screen thereof accessed by an Internet-enabled computer system.

Detailed Description Text (349):
TRADE-MARK.TM., accessible through a particular UPC REQUEST.TM. Retail Website or the UPC REQUEST.TM. Central Website, enables consumers to quickly access particular types of product-related information from the UPC REQUEST.TM. Database, by using the trademark or tradename of the related product. When this mode of service is requested, a search screen is displayed within the information frame so that the consumer or sales clerk can enter the trademark or tradename for the related consumer product.

Detailed Description Text (350):
PRODUCT-TYPE.TM., accessible through a particular UPC REQUEST.TM. Retail Website or the UPC REQUES.TM. Central Website, enables consumers to quickly access particular types of product-related information from the UPC REQUEST.TM. Database, by using a descriptive term for the related product. When this mode of service is requested, a search screen is displayed within the information frame so that the consumer or sales clerk can enter a descriptive term for the related consumer product.

Detailed Description Text (351):
To maximize value to a particular retail store's customers, each UPC REQUEST.TM. Retail Website served at each retail store subscriber would be made accessible to consumers outside their retail stores (e.g. at home, in the office or on the road) by several Internet access methods including, for example: through a hot-linked URL posted on the retail store's Website, pointing to the UPC REQUEST.TM. Retail Website; through a publicly accessible URL, e.g. http://www.upcrequest.com/@retail store; etc.

Detailed Description Text (352):
Benefits Provided to Sponsors Promoting the UPC Request.TM. System

Detailed Description Text (355):
HOME-PAGE.TM. Will provide sponsors with valuable advertising space on the UPC REQUEST.TM. Central Website, for subleasing to retailers, manufacturers and business concerns.

Detailed Description Text (356):
INFO-LINK.TM. and UPC-ENCODED-APPLET-DOWNLOAD/DISTRIBUTE.TM. will provide sponsors with an effective way of promoting their products and/or services among manufacturers, retailers and consumers using the UPC REQUEST.TM. System.

Detailed Description Text (357):
Benefits Provided to Customers Using the UPC Request.TM. System in Retail Stores

Detailed Description Text (358):
HOME-PAGE.TM. will allow customers to automatically access Home Page of any manufacturer's Website by simply scanning the UPC bar code symbol on any product thereof at any UPC REQUEST.TM. information kiosk in a retailer's store.

Detailed Description Text (359):
CYBER-SERVICE.TM. will allow customers to quickly access (by touch-screen URL selection) particular types of product-related information that have been published on the World Wide Web (WWW) by manufacturers, their agents or others, and registered within the UPC REQUEST.TM. Database through INFO-LINK.TM..

Detailed Description Text (360):
TRADE-MARK.TM. will allow customers to quickly access product related information menus from the UPC REQUES.TM. Database using trademarks or tradenames used in connection with the product on which information is being sought.

Detailed Description Text (361):
PRODUCT-TYPE.TM. will allow customers to quickly access product related information menus from the UPC REQUEST.TM. Database using descriptive terms related to the product on which information is being sought.

Detailed Description Text (362):
Benefits Provided to Customers Using the UPC REQUES.TM. System At Home, In the Office, or on the Road

Detailed Description Text (363):
HOME-PAGE.TM. will allow customers to automatically access the Home Page of any manufacturer's Website by simply entering the UPC (or UPC/EAN) number on any consumer product, into a UPC REQUEST.TM. search screen served from the UPC REQUEST.TM. Central Website and accessible to anyone using an Internet-enabled computer system at home, in the office, or on the road.

Detailed Description Text (364):
CYBER-SERVICE.TM. will allow customers to quickly access from the UPC REQUEST.TM. Database, particular types of product-related information that have been published

on the WWW by manufacturers, their agents or others and registered within the UPC REQUESTFM Database through the INFO-LINK.TM. service.

Detailed Description Text (365):
TRADE-MARK.TM. will allow customers to quickly access product related information menus from the UPC REQUES.TM. Database using trademarks or tradenames used in connection with the product on which information is being sought.

Detailed Description Text (366):
PRODUCT-TYPE.TM. will allow customers to quickly access product related information menus from the UPC REQUEST.TM. Database using descriptive terms related to the product on which information is being sought.

Detailed Description Text (367):
Benefits Provided to Retailers Providing UPC REQUEST.TM. System in Their Stores

Detailed Description Text (370):
CYBER-SERVICE.TM. will provide retail sales personnel with an opportunity to learn about a retailer's products by scanning the UPC bar code symbols on such products, and selecting product-related Web pages for in-store review and sales-training sessions whenever customer demand allows.

Detailed Description Text (371):
HOME-PAGE.TM. and CYBER-SERVICE.TM. will provide retailers with valuable advertising space in their stores for subleasing to manufacturers and others (e.g. local sponsors) in order to self-finance the store-wide delivery of the UPC REQUEST.TM. Service.

Detailed Description Text (372):
TRADE-MARK.TM. will allow sales clerks and customers to quickly access product related information menus from the UPC REQUEST.TM. Database using trademarks or tradenames used in connection with the product on which information is being sought.

Detailed Description Text (373):
PRODUCT-TYPE.TM. will allow sales clerks and customers to quickly access product related information menus from the UPC REQUEST.TM. Database using descriptive terms related to the product on which information is being sought.

Detailed Description Text (374):
Proposed Revenue Model for the UPC REQUEST.TM. System

Detailed Description Text (375):
The UPC REQUEST.TM. System will generate revenue from at least four sources: Manufacturer Fees paid by manufacturers who want to register their products and product-related Web pages with the UPC REQUEST.TM. Database; Retailer Fees paid by retailers who want to provide bar code driven access to the UPC REQUEST.TM. System in retail stores; Sponsor Fees paid by Sponsors of the UPC REQUEST.TM. System; and Advertiser Fees paid by advertisers on the UPC REQUEST.TM. Central Website.

Detailed Description Text (376):
Manufacturers desiring to register their consumer products and product-related Web pages within the UPC REQUEST.TM. Database would pay a one-time Manufacture Registration Fee, based on volume of sales. An annual maintenance fee may be desired or necessary. Minimally, such fees should cover the cost of the EDI and UPN/URL Database Management software (and updates) automatically downloaded to each manufacturer upon registration. Such Web-based EDI software enables manufacturers to easily manage the UPC numbers and Web page URLs associated with their changing product lines, an d automatically transmit such information to the UPC REQUEST.TM. Manufacturer/Product Registration Subsystem in order that the UPC REQUEST.TM.

Database Management Subsystem is periodically updated.

Detailed Description Text (377):
Retailers providing bar code driven access to the UPC REQUEST.TM. System in their retail stores would pay an annual Retailer License Fee based on the number of UPC REQUEST.TM. kiosks deployed therein (within store isles, at POS stations and behind information/service counters).

Detailed Description Text (378):
Each sponsor of the UPC REQUESTrm System would pay an annual Sponsor Fee for the right to display its name, trademark/servicemark and/or message in hypertext within a selected portion of the sponsor frame displayed by licensed UPC REQUEST.TM. kiosks in retail stores, as well as Internet-enabled computer systems accessing the UPC REQUEST.TM. Central Website. For marketing reasons, it would be desirable to limit the number of sponsors of the UPC REQUEST.TM. System at any instant in time.

Detailed Description Text (379):
Advertisers, who advertise on the UPC REQUEST.TM. Central Website, would pay an Advertiser Fee based on the time and location that the Web advertisement is displayed.

Detailed Description Text (380):
Usage of the UPC REQUEST.TM. in Diverse Retail Markets

Detailed Description Text (381):
The UPC REQUEST.TM. System can be used to provide consumers quick access to useful product-related information in diverse types of retail shopping environments including, for example, retail superstores, discount department stores, home-improvement stores, computer superstores, drugstores and pharmacies, music stores, video rental stores, bookstores, supermarkets, grocery stores and the like. Each of these retail markets provides a unique environment in which the UPC REQUEST.TM. System can be used by manufacturers of consumer products to effectively deliver product-related information to consumers in retail stores, at home, in the office or on the road, before and after consumer purchases.

Detailed Description Text (382):
As the UPC REQUES.TM. System provides manufacturers with an effective way and means of making direct contact with present and future customers, it enables both manufacturers and retailers alike to influence demand in ways that have hitherto have been unavailable. Such features of the UPC REQUEST.TM. System present enormous growth opportunities in retail supply and demand chain management across diverse markets within our ever expanding global economy.

Detailed Description Text (385):
For example, in the illustrative embodiments described hereinabove, separate databases are maintained by each data-synchronized IPD Server for (i) registered products within the system, and (ii) non-registered products within the system. Notably, the reasons for using a dual database design of this sort would be based largely on economics, namely: only those companies who have paid the required maintenance (or registration) fees get their products and linked-URLs "registered" with the system, whereas non-paying companies and organizations donot get their products and linked-URLs registered with the system, regardless of how such product-URL information is ascertained (e.g. by solicitation versus data-mining).

Detailed Description Text (386):
Thus it is contemplated that in some embodiments of the present invention, each IPD Server will be designed to maintain only a single database for maintaining product-URL information currently available on the Internet. In such embodiments of the present invention, the concept of "non-registered" products will be altogether avoided, since the system implementation and administration may be designed not to

require companies to pay maintenance (or registration) fees in order that their products and linked URLs are registered with the IPI system. Instead, some alternative income producing scheme will be used in such embodiments of the present invention (e.g. user fees, subscription fees, Internet browser-licensing fees, etc.) for system maintenance and administration.

Detailed Description Text (387):
When practicing the system and method of the present invention, it is preferred that the UPC label (with its human-readable UPC number) assigned to the particular product be attached, embossed or otherwise embodied on an accessible surface thereof. In addition to applying the UPC label to the external packaging of the product, it is preferred that the UPC label also be printed on any and all product instructions and manuals provided with the product. In this way, the UPC number can be easily read by a human being and then used to access a desired type of product information using the system and method of the present invention.

Detailed Description Text (388):
In order that the system hereof can be used to find information pertaining to large products such as automobiles, motorcycles, skidoos, farm machinery, boats, etc., the present invention also contemplates assigning UPNs (e.g. UPC or EAN numbers) to such products and attaching, embossing or otherwise embodying the same on an accessible surface thereof. Also, the UPN label can be printed on all instruction booklets and/or operating manuals normally provided with the product. In this way, information related to any particular product that is posted anywhere on the Internet and linked to URLs registered with the IPD Servers 11 of the system hereof can be readily found using the uniquely assigned UPC number assigned thereto by the manufacturer at the time of sale. Notably, multimedia information about such products can be most helpful in regard to the operation, repair and servicing of such products.

Detailed Description Text (390):
Also, while the system of the illustrative embodiment has been shown used to collect, transport and serve information related to consumer products, it is understood that the system can be used to link the URLs of HTML (and other Internet) documents with consumer services assigned uniform service numbers (USN) which may be based on the UPC or EAN numbering system, or some other suitable system. In such alternative embodiments, the IPI Database would contain information pertaining to uniform service numbers (USN) that have been linked to the URLs of HTML or like documents on the Internet by the manufacturer or its agents, in essentially the same manner as conducted for consumer products. Such USN/URL management operations can be carried out in a similar to that described in connection with UPN/URL management along the retail supply and demand chain.

Detailed Description Text (391):
In connection with the consumer service information embodiment of the present invention, it is understood that at present, few (if any) services have been assigned a UPC (or EAN) number in the manner that nearly all consumer products have been assigned in the contemporary period. In spite of this fact, however, the present invention contemplates the need and utility of widespread assignment of UPC, EAN or similar numbers by service providers to particular services (as well as the imprinting of UPC, EAN or similar symbols on printed service brochures and advertisements. Notably, assigning uniform service numbers (USNs) to particular services, and labeling printed and graphical brochures and advertisements with such universal numbers, will provide anumber of new opportunities hitherto unavailable.

Detailed Description Text (392):
In particular, service-related information could be easily found (i.e. located and accessed) on Web-sites using the system and method of the present invention, and thereafter the service easily procured through an electronic datatransaction. In accordance with the present invention, this can be achieved by uniquely identifying

and assigning "particular" services by a Universal Service Code (USC) which has many if not all of the attributes of a conventional UPC. While not necessary, a single digit may be optionally added to the USC in order to demark that services, rather than products, are being identified. An example of such USC labeling would be printing an assigned UPC label (number) on: admission tickets to atheatrical, dramatic or musical performance and/or its playbill; admission tickets to a movie; admission tickets to a concert and/or its concert program; admission tickets to a sporting event and/or its sports program; admission tickets to an art, science or history museum; admission tickets to the zoo or botanical gardens; and the like. The UPC label would be encoded to identify a particular event at which an entertainment, educational or professional service is provided. The UPC label printed on the tangible medium associated with the promotion of or access to the particular service would then be registered with the IPSI Registrant Database of the system hereof, along with the name of the provider of the service, and a list of URLs that identify the Web locations at which particular kinds of information related to the particular service can be found (in accordance with the categories of FIG. 4A2).

CLAIMS:

1. A method of purchasing a consumer product over the Internet comprising the steps of: (a) storing on a first Internet-based information server connected to an information network, a Consumer Product Information Request (CPIR) enabling Servlet encoded with a Universal Product Number (UPN) of identifying a particular consumer product; (b) embedding a CPIR-enabling Servlet tag associated with said CPIR-enabling Servlet within the HTML code of a Web page served from a second Internet-based information server; (c) displaying said Web page with said CPIR-enabling Servlet tag embedded therein, on a Web-browser enabled graphical user interface (GUI) nmining on a client computer operably connected to said information network and accessible by a consumer; (d) said consumer clicking on said CPIR-enabling Servlet tag embedded within said Web page, so as to automatically initiate said CPITR-enabling Serviet associated with said CPTR-enabling Serviet tag to execute on said information network, and a request for information on the consumer product identified by said UPN to be carried out against an Internet-enabled database server; and (e) in response to said request, automatically displaying on said Web-browser enabled GUI, information retrieved from said Internet-enabled database server for access and use by said consumer; wherein said displayed information comprises one or more Uniform Resource Locators (URLs) pointing to one or more EC-enabled stores or on-line catalogs on the WWW at which the consumer product identified by said encoded UPN can be purchased and delivered to a particular address in physical space.

2. A system for purchasing a consumer product over the Internet comprising: a first Intemet-based information server operably connected to an information network, for storing a Consumer Product Information Request (CPIR) enabling Servlet encoded with a Universal Product Number (UPN) identifying a particular consumer product; a second Internet-based information server operably connected to said information network, for serving a Web page having HTML code, within which a CPIR-enabling Servlet tag associated with said CPIR-enabling Servlet is embedded; an Internet-enabled database server operably connected to said information network, for containing information on the consumer product identified by said UPN, and serving said information to an Internet-enabled client computer in response to a request for said information made by said Internet-enabled client computer; an Intemet-enabled client computer operably connected to said information network and accessible by a consumer, said Intemet-enabled client computer having a Web browser program for producing a Web-browser enabled graphical user interface (GUI) for displaying said Web page with said CPIR-enabling Servlet tag embedded therein; wherein, when said consumer clicks on said CPIR-enabling Servlet tag embedded within said Web page, (1) said CPIR-enabling Servlet associated with said CPIR-enabling Servlet tag is automatically executed on said information network, and a

request for information on the consumer product identified by said UPN is automatically carried out against said Intemet-enabled database server; and (2) in response to said request, said Web-browser enabled GUI automatically displays the information retrieved from said Intemet-enabled database server for access and use by said consumer; wherein said displayed information comprises one or more URLs pointing to one or more EC-enabled stores or on-line catalogs on the WWW at which the consumer product identified by said encoded UPN can be purchased and delivered to a particular address in physical space.

3. A method of purchasing a consumer product over the Internet comprising the steps of: (a) embedding a CPIR-enabling Serviet tag within the HTML-code of a consumer product advertisement served from an Web-based information server operably connected to an information network, wherein said CPIR-enabling Servlet tag is associated with a CPIR-enabling Servlet stored on an Internet-enabled information server operably connected to said information network, and encoded with a Universal Product Number (UPN) identifying a particular consumer product; (b) selecting said CPIR-enabling, whereupon (1) the CPIR-enabling Servlet is automatically executed, (2) a search is conducted against a UPN/URL database, and (3) the information results from said search are automatically displayed in an independent graphical user interface (GUI) displayed on an Internet-enabled client computer, wherein said displayed information results comprise one or more Uniform Resource Locators (URLs) pointing to one or more EC-enabled stores or on-line catalogs on the World Wide Web (WWW), at which the consumer product identified by the encoded UPN can be purchased and delivered to a particular address in physical space.

4. A system for purchasing a consumer product over the Internet comprising: an Web-based information server operably connected to an information network, for serving a consumer product advertisement having HTML code, within which a CPIR-enabling Servlet tag is embedded; an Internet-enabled information server for storing a CPIR-enabling Servlet associated with said CPIR-enabling Servlet tag, and encoded with a Universal Product Number (UPN) identifying a particular consumer product; an Internet-enabled client computer for displaying said consumer product advertisement in which said CPIR-enabling Servlet tag is embedded, and selectable as by a clicking operation so that said CPIR-enabling the CPIR-enabling Servlet is automatically executed, and a search is conducted against a UPN/URL database, and the information results from said search are automatically displayed in an independent graphical user interface (GUI) displayed on said Internet-enabled client computer, wherein said displayed information results comprise one or more Uniform Resource Locators (URLs) pointing to one or more EC-enabled stores or on-line catalogs on the World Wide Web (WWW), at which the consumer product identified by the encoded UPN can be purchased and delivered to a particular address in physical space.

5. A cyber-kiosk launchable from a predefined point of presence along the HTML fabric of the World Wide Web (WWW), said cyber-kiosk comprising: a consumer product information requesting (CPIR) enabling Servlet code stored on an Internet-enabled information server operably connected to an information network, and encoded with a Universal Product Number (UPN) identifying a particular consumer product; and a CPIR-enabling Servlet tag associated with said CPIR-enabling Servlet tag, and being embedded within Web-based document located at a predefined point of presence along the HTML fabric of the WWW; wherein said Web-based document is served from a Web-based information server operably connected to said information network; wherein said CPIR-enabling Servlet tag selectable by a consumer by way of a clicking operation so that said CPIR-enabling the CPIR-enabling Servlet is automatically executed, and a search is conducted against a UPN/URL database, and the information results from said search are automatically displayed in an independent graphical user interface (GUI) displayed on said Internet-enabled client computer, and wherein said displayed information results comprise one or more Uniform Resource Locators (URLs) pointing to one or more information resources the WWW, at which brand-related information about the consumer product identified by the encoded UPN

can be accessed, displayed and reviewed by the consumer.

8. A method of accessing consumer product related information at points within HTML-encoded documents, said method comprising the steps of: (a) storing on a first Internet-based information server connected to an information network, a Consumer Product Information Request (CPTR) enabling Serviet encoded with a Universal Product Number (UPN) of a consumer product; (b) embedding a CPIR-enabling Serviet tag associated with said CPIR-enabling Servlet within the HTML code of a Web page served from a second Internet-based information server; (c) displaying said Web page with said CPIR-enabling Servlet tag embedded therein, on a Web-browser enabled graphical user interface (GUT) running on a client computer operably connected to said information network and accessible by a consumer; (d) said consumer clicking on said CPIR-enabling Servlet tag embedded within said Web page, so as to automatically initiate said CPIR-enabling Serviet associated with said CPIR-enabling Servlet tag to execute on said information network, and a request for information links on the consumer product identified by said UPN to be carried out against an Internet-enabled database server; and (e) in response to said request, automatically displaying on said Web-browser enabled GUI, information links retrieved from said Intemet-enabled database server for access and use by said consumer; wherein said displayed information links comprise one or more Uniform Resource Locators (URLs) pointing to one or more information resources on the WWW, at which information related to the consumer product identified by said encoded UPN can be accessed and displayed for review and consideration.

10. The method of claim 8, wherein said one or more URLs comprise a manufacturer-defmed menu of categorized URLs pointing to product-related Web-documents.

16. A system for accessing consumer product related information at points within HTML-encoded documents, said system comprising: a first Intemet-based information server operably connected to an information network, for storing a Consumer Product Information Request (CPIR) enabling Servlet encoded with a Universal Product Number (UPN) of a consumer product; a second Internet-based information server operably connected to said information network, for serving a Web page having HTML code, within which a CPIR-enabling Servlet tag associated with said CPIR-enabling Servlet is embedded; an Internet-enabled database server operably connected to said information network, for containing information on the consumer product identified by said UPN, and serving said information to an Internet-enabled client computer in response to a request for said information made by said Internet-enabled client computer; an Internet-enabled client computer operably connected to said information network and accessible by a consumer, said Intemet-enabled client computer having a Web browser program for producing a Web-browser enabled graphical user interface (GUI) for displaying said Web page with said CPIR-enabling Servlt tag embedded therein; wherein, when said consumer clicks on said CPIR-enabling Servlet tag embedded within said Web page, (1) said CPIR-enabling Servlet associated with said CPIR-enabling Servlet tag is automatically executed on said information network, and a request for information on the consumer product identified by said UPN is automatically carried out against said Internet-enabled database server; and (2) in response to said request, said Web-brower enabled GUI automatically displays the information retrieved from said Internet-enabled database server for access and use by said consumer; wherein said displayed information links comprise one or more Uniform Resource Locators (URLs) pointing to one or more information resources on the WWW, at which information related to the consumer product identified by said encoded UPN can be accessed and displayed for review and consideration.

18. The system of claim 16, wherein said one or more URLs comprise a rnanufacturer-defined menu of categorized URLs pointing to product-related Web-documents.

23. An Internet-based Consumer product information search and delivery method, said method comprising the steps of: (a) for each consumer product registered within a

UPN/URL database server operably connected to an information network, and identified by a Universal Product Number (UPN) automatically generating a Consumer Product Information Request (CPIR) enabling Servlet encoded with said UPN; (b) storing on a first Interniet-based information server connected to an information network, each said Consumer Product Information Request (CPIR) enabling Servlet encoded with the Universal Product Number (UPN) of a consumer product; (c) embedding a CPIR-enabling Servlet tag associated with one of said CPIR-enabling Servlets, within the HTML code of a Web page served from a second Internet-based information server; (d) displaying said Web page with said CPIR-enabling Servlet tag embedded therein, on a Web-browser enabled graphical user interface (GUI) running on a client computer operably connected to said information network and accessible by a consumer; (e) said consumer clicking on said CPIR-enabling Serviet tag embedded within said Web page, so as to automatically initiate said CPIR-enabling Serviet associated with said CPIR-enabling Servlet tag to execute on said information network, and a request for information links on the consumer product identified by said UPN to be carried out against an Intemet-enabled database server; and (f) in response to said request, automatically displaying on said Web-browser enabled GUI, information retrieved from said Internet-enabled database server for access and use by said consumer; wherein said displayed information links comprise one or more Uniform Resource Locators (URLs) pointing to one or more information resources on the WWW, at which information related to the consumer product identified by said encoded UPN can be accessed and displayed for review and consideration.

24. An Internet-based consumer product information search and delivery system, said system comprising: a subsystem for automatically generating, for each consumer product registered within a UPN/URL database server operably connected to an information network and identified by a Universal Product Number (UPN), a Consumer Product Information Request (CPIR) enabling Servlet encoded with said UPN; a first Intemet-based information server operably connected to an information network, for storing a Consumer Product Information Request (CPIR) enabling Serviet encoded with a Universal Product Number (UPN) of a consumer product; a second Intemet-based information server operably connected to said information network, for serving a Web page having HTML code, within which a CPIR-enabling Servlet tag associated with said CPIR-enabling Servlet is embedded; an Internet-enabled database server operably connected to said information network, for containing information on the consumer product identified by said UPN, and selving said information to an Internet-enabled client computer in response to a request for said information made by said Internet-enabled client computer; an Internet-enabled client computer operably connected to said information network and accessible by a consumer, said Internet-enabled client computer having a Web browser program for producing a Web-broxvser enabled graphical user interface (GUI) for displaying said Web page with said CPIR-enabling Servlet tag embedded therein; wherein, when said consumer clicks on said CPIR-enabling Servlet tag embedded within said Web page, (1) said CPIR-enabling Servlet associated with said CPIR-enabling Servlet tag is automatically executed on said information network, and a request for information links on the consumer product identified by said UPN is automatically carried out against said Internet-enabled database server; and (2) in response to said request, said (Web-brower) Web-browser enabled GUI automatically displays the information links retrieved from said Intemet-enabled database server for access and use by said consumer; wherein said displayed information links comprise one or more Uniform Resource Locators (URLs) pointing to one or more information resources on the WWW, at which information related to the consumer product identified by said encoded UPN can be accessed and displayed for review and consideration.

25. An Internet-based consumer product information search and delivery method, said method comprising the steps of: (a) for each consumer product registered within a UPN/URL database server operably connected to an information network, and identified by a Universal Product Number (UPN) automatically generating a Consumer Product Information Request (CPIR) enabling Servlet encoded with said UPN; (b)

storing on a first Internet-based information server connected to an information network, each said Consumer Product Information Request (CPIR) enabling Servlet encoded with the Universal Product Number (UPN) of a consumer product; (c) for each said consumer product, displaying a CPIR-enabling Servlet tag associated with one of said CPIR-enabling Serviets; (d) selecting one of said CPIR-enabling Servlet tags, and downloading said selected CPIR-enabling Servlet tag to first Internet-enabled client computer; (e) embedding the downloaded CPIR-enabling Serviet tag within the HTML code of a Web page served from a second intemet-based information server; (f) displaying said Web page with said CPIR-enabling Serviet tag embedded therein, on a Web-browser enabled graphical user interface (GUI) running on a second Internet-enabled client computer operably connected to said information network and accessible by a consumer; (g) said consumer clicking on said CPIR-enabling Serviet tag embedded within said Web page, so as to automatically initiate said CPIR-enabling Servlet associated with said CPIR-enabling Serviet tag to execute on said information network, and a request for information links on the consumer product identified by said UPN to be carried out against an Internet-enabled database server; and (h) in response to said request, automatically displaying on said Web-browser enabled GUI, infomiation links retrieved from said Internet-enabled database server for access and use by said consumer; wherein said displayed information links comprise one or more Uniform Resource Locators (URLs) pointing to one or more information resources on the WWW, at which information related to the consumer product identified by said encoded UPN can be accessed and displayed for review and consideration.

26. The Internet-based consumer product information search and delivery method of claim 25, wherein said one or more URLs have been specified by the manufacturer of the consumer product identified by said UPN and/or an agent thereof.

27. An Internet-based consumer product information search and delivery system, said system comprises: a subsystem for automatically generating, for each consumer product registered within a UPN/URL database server operably connected to an information network and identified by a Universal Product Number (UPN), a Consumer Product Information Request (CPIR) enabling Servlet encoded with said UPN; a first Internet-based information server operably connected to an information network, for storing a Consumer Product Information Request (CPIR) enabling Servlet encoded with the UPN of a consumer product; a Web-based information server operably connected to the information network, for displaying a CPIR-enabling Serviet tag generated for each one of said CPTR-enabling Serviets; a first Internet-enabled client computer for browsing said CPIR-enabling Servlet tags displayed from Web-based information server, and for selecting one of said CPIR-enabling Servlet tags and downloading said selected CPIR-enabling Servlet tag to said first Internet-enabled client computer; a second Internet-based information server operably connected to said information network, for serving a Web page having HTML code, within which said downloaded CPIR-enabling Servlet tag is embedded; an Internet-enabled database server operably connected to said information network, for containing information on the consumer product identified by said UPN, and serving said information to a second Internet-enabled client computer in response to a request for said information made by said second Internet-enabled client computer; an Internet-enabled client computer operably connected to said information network and accessible by a consumer, said internet-enabled client computer having a Web browser program for producing a Web-browser enabled graphical user interface (GUI) for displaying said Web page with said CPIR-enabling Servlet tag embedded therein; wherein, when said consumer clicks on said CPTR-enabling Servlet tag embedded within said Web page, (1) said CPIR-enabling Servlet associated with said CPIR-enabling Servlet tag is automatically executed on said information network, and a request for information links on the consumer product identified by said UPN is automatically carried out against said Intemet-enabled database server; and (2) in response to said request, said Web-browser enabled GUI automatically displays the information links retrieved from said Internet-enabled database server for access and use by said consumer; wherein said displayed information links comprise one or

more Uniform Resource Locators (URLs) pointing to one or more information resources on the WWW, at which information related to the consumer product identified by said encoded UPN can be accessed and displayed for review and consideration.

28. The Intemet-based consumer product information search and delivery system of claim 27, wherein said one or more URLs have been specified by the manufacturer of the consumer product identified by said UPN and/or an agent thereof.

L9: Entry 1 of 2 File: USPT Sep 23, 2003

US-PAT-NO: 6625581
DOCUMENT-IDENTIFIER: US 6625581 B1

TITLE: METHOD OF AND SYSTEM FOR ENABLING THE ACCESS OF CONSUMER PRODUCT RELATED INFORMATION AND THE PURCHASE OF CONSUMER PRODUCTS AT POINTS OF CONSUMER PRESENCE ON THE WORLD WIDE WEB (WWW) AT WHICH CONSUMER PRODUCT INFORMATION REQUEST (CPIR) ENABLING SERVLET TAGS ARE EMBEDDED WITHIN HTML-ENCODED DOCUMENTS

DATE-ISSUED: September 23, 2003

INVENTOR-INFORMATION:

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IPF, Inc.	Stamford	CT			02

APPL-NO: 09/ 447121 [PALM]
DATE FILED: November 22, 1999

PARENT-CASE:
RELATED CASES This Application is a Continuation-in-Part of Application 09/441,973 filed Nov. 17, 1999; which is a Continuation-in-Part of application Ser. No. 09/284,917 filed Jun. 25, 1999 which was entered into the U.S. on Apr. 21, 1999 which is a National Stage Entry Application from International Application No. PCT/US97/19227 filed Oct. 27, 1997, published as WIPO Publication No. WO 98/19259 on May 7, 1998; as well as a Continuation-in-Part of the following U.S. applications: Ser. No. 08/736,798 filed Oct. 25, 1996, now U.S. Pat. No. 5,918,214; Ser. No. 08/752,136 filed Nov. 19, 1996, now U.S. Pat. No. 6,064,979; Ser. No. 08/826,120 filed Mar. 27, 1997; U.S. Pat. No. 08/854,877 filed May 12, 1997, now U.S. Pat. No. 5,950,173; Ser. No. 08/871,815 filed Jun. 9, 1997, now abandoned; and U.S. Ser. No. 08/936,375 filed Sep. 24, 1997, each said Application is commonly owned by IPF, Inc., and is incorporated herein by reference in its entirety as if fully set forth herein.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	6-107574	April 22, 1994
FR	96 12524	October 6, 1996

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/27; 705/26, 705/14, 709/200, 709/245
US-CL-CURRENT: 705/27; 705/14, 705/26, 709/200, 709/245

FIELD-OF-SEARCH: 705/26, 705/27

PRIOR-ART-DISCLOSED:

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ART-UNIT: 3625

PRIMARY-EXAMINER: Coggins; Wynn W.

ASSISTANT-EXAMINER: Fadok; Mark

ATTY-AGENT-FIRM: Perkowski, Esq., PC; Thomas J.

ABSTRACT:

Method of and system for delivering consumer product related information to consumers over the Internet. The system and method involves creating an UPN-encoded Consumer Product Information (CPIR) enabling Applet for each consumer product registered within a manufacturer-managed UPN/URL database management system. Each CPIR-enabling Applet is encapsulated within an executable file and then stored in the UPN/URL database management system. Each CPIR-enabling Applet is searchable and downloadable by, for example, (1) retailers purchasing products from an electronic-commerce enabled product catalog, (2) advertisers desiring to link consumer product information to Web-based product advertisements, or (3) anyone having a legitimate purpose of disseminating such information within the stream of electronic commerce. After downloading and extraction from its encapsulating file, the CPIR-enabling Applet is embedded within an HTML-encoded document associated with, for example, an EC-enabled store, on-line auction site, product advertisement, Internet search engine or directory, and the like. Upon encountering such an Applet-encoded HTML document on the WWW, the consumer need only perform a single mouse-clicking operation to automatically execute the underlying CPIR-enabling Applet (on either the client or server side of the network), causing a UPN-directed search to be performed against the manufacturer-defined UPN/URL Database, and the results thereof displayed in an independent Java GUI, without disturbing the consumer's point of presence on the WWW. Preferably, the CPIR-enabling Applets are realized using Java.TM. technology, although it is understood that alternative technologies can be used to practice the system and methods of the present invention.

28 Claims, 78 Drawing figures

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Search Results - Record(s) 1 through 2 of 2 returned.

☑ 1. Document ID: US 6625581 B1

L9: Entry 1 of 2 File: USPT Sep 23, 2003

US-PAT-NO: 6625581
DOCUMENT-IDENTIFIER: US 6625581 B1

TITLE: METHOD OF AND SYSTEM FOR ENABLING THE ACCESS OF CONSUMER PRODUCT RELATED INFORMATION AND THE PURCHASE OF CONSUMER PRODUCTS AT POINTS OF CONSUMER PRESENCE ON THE WORLD WIDE WEB (WWW) AT WHICH CONSUMER PRODUCT INFORMATION REQUEST (CPIR) ENABLING SERVLET TAGS ARE EMBEDDED WITHIN HTML-ENCODED DOCUMENTS

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw D

☐ 2. Document ID: US 6542933 B1

L9: Entry 2 of 2 File: USPT Apr 1, 2003

US-PAT-NO: 6542933
DOCUMENT-IDENTIFIER: US 6542933 B1

TITLE: System and method of using machine-readable or human-readable linkage codes for accessing networked data resources

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw D

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DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR			
L12	L10	0	L12
L11	l4 or L10	0	L11
DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR			
L10	((image with size) same upc) and url	1	L10
L9	L4 and url and upc	2	L9
L8	L5 and url and upc	0	L8
L7	L6 and l5	0	L7
L6	705/?.ccls.	2300	L6
L5	unique adj (UPC or (universal adj product adj code))	17	L5
L4	unique adj2 (UPC or (universal adj product adj code))	20	L4

L3	((uPC or (universal adj product adj code)) with unique)	127	L3
L2	((uPC or (universal adj product adj code)) with unique) same (transform$ or chang$ or convers$)	2	L2
L1	((uPC or (universal adj product adj code)) with unique) with (transform$ or chang$ or convers$)	0	L1

END OF SEARCH HISTORY

First Hit Fwd Refs

End of Result Set

Generate Collection Print

L13: Entry 17 of 17 File: USPT Oct 19, 1982

US-PAT-NO: 4355372
DOCUMENT-IDENTIFIER: US 4355372 A

TITLE: Market survey data collection method

DATE-ISSUED: October 19, 1982

INVENTOR-INFORMATION:

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Goldberg; George	Great Neck	NY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NPD Research Inc.	Floral Park	NY			02

APPL-NO: 06/ 220140 [PALM]
DATE FILED: December 24, 1980

INT-CL: [03] G06F 3/04

US-CL-ISSUED: 364/900
US-CL-CURRENT: 379/92.04; 379/910, 379/93.37, 705/10, 902/39

FIELD-OF-SEARCH: 364/2MSFile, 364/9MSFile, 179/2A, 358/85, 455/2, 235/376, 340/825.54, 340/825.55, 340/146.3ED, 340/146.3SY

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3400378	September 1968	Smith et al.	179/2A
☐	3819862	June 1974	Hedges	179/2A
☐	4091448	May 1978	Clausing	364/200
☐	4126762	November 1978	Martin et al.	179/2A
☐	4153931	May 1979	Green et al.	364/200

4218737 August 1980 Buscher et al. 364/900

ART-UNIT: 237

PRIMARY-EXAMINER: Springborn; Harvey E.

ATTY-AGENT-FIRM: Hubbell, Cohen, Stiefel & Gross

ABSTRACT:

A method for independently electronically collecting related market survey data from a plurality of diverse locations (6,6') for temporary storage at each of the independent diverse locations (6,6') where the data is collected for subsequent transmission thereof from these locations (6,6') over a telephone type link (30,36,42) for accumulative processing thereof at a remote central electronic data processor. An interactive interchangeable prompt message display is displayed on a visual display device (32) indicating one of a plurality of market survey categories in a predefined sequence. An actual data input signal may be provided via a keyboard (70) or barboard (29) and/or wand (18,28) in response to the prompt message display with this input being stored in a memory (16) for subsequent transmission. Prior to storage in the memory (16), the data is stored in a buffer and is displayed on the display device (32) to enable confirmation prior to transfer to the bulk memory (16). When a confirmation command signal is provided to the microcomputer (10,12,14) the data is transferred to the bulk memory (16) and the display (32) is changed to display the next prompt message in the sequence. The sequence recycles for each market transaction for enabling independent integral storage (16) of each product transaction at the location of the unit (6,6'). This stored data is then transmitted to the remote data processor via acoustic coupling (30,36,42) to the telephone line.

9 Claims, 49 Drawing figures

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L13: Entry 14 of 17 File: USPT Sep 10, 1985

US-PAT-NO: 4540880
DOCUMENT-IDENTIFIER: US 4540880 A

TITLE: Universal product code scannable coupon

DATE-ISSUED: September 10, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hipko; George P.	Milltown	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Beatrice Foods, Co.	Chicago	IL			02

APPL-NO: 06/ 512658 [PALM]
DATE FILED: July 11, 1983

INT-CL: [03] G06K 19/00

US-CL-ISSUED: 235/487; 235/493
US-CL-CURRENT: 235/487; 235/493

FIELD-OF-SEARCH: 235/487, 235/493, 283/56, 283/81, 283/85

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL | Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3715570	February 1973	Weichselbaum	235/493

ART-UNIT: 233

PRIMARY-EXAMINER: Pitts; Harold I.

ATTY-AGENT-FIRM: Shlesinger, Arkwright, Garvey & Fado

ABSTRACT:

A consumer attachable pre-oriented scannable coupon for use in combination with an article and an optical scanner system, comprising a generally planar member having a front and rear surface; said member including a stub portion and a dealer redemption return portion; force responsive separation means disposed between said stub portion and said dealer redemption return portion; said stub portion rear surface having adhesive means generally adjacent to the separation means for securing said stub portion to said article and for permitting ease in separation of said dealer redemption return portion from said stub portion once said stub portion is secured to an article; said stub portion front surface having optically scannable indicia means thereon for being scanned by said scanner system for transmitting data thereto; said stub portion front surface having premium information printed thereon spaced from an optically scannable indicia means; said dealer redemption return portion of front surface having printed information thereon; and, said dealer redemption return portion being separatable from said stub portion generally subsequent to said optically scannable indicia means being scanned by said scanner system and whereby said adhesive means secures said stub portion to said article while sufficient force is applied to said dealer redemption return portion for causing separation of said dealer redemption return portion from said stub portion as disclosed.

12 Claims, 5 Drawing figures

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Search Results - Record(s) 1 through 2 of 2 returned.

1. Document ID: US 6636721 B2

L2: Entry 1 of 2 File: USPT Oct 21, 2003

US-PAT-NO: 6636721
DOCUMENT-IDENTIFIER: US 6636721 B2

TITLE: Network engineering/systems system for mobile satellite communication system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

2. Document ID: US RE31951 E

L2: Entry 2 of 2 File: USPT Jul 16, 1985

US-PAT-NO: RE31951
DOCUMENT-IDENTIFIER: US RE31951 E

TITLE: Market survey data collection method

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
((uPC or (universal adj product adj code)) with unique) same (transform$ or chang$ or convers$)	2

Display Format: TI Change Format

Previous Page Next Page Go to Doc#

L13: Entry 14 of 17 File: USPT Sep 10, 1985

DOCUMENT-IDENTIFIER: US 4540880 A
TITLE: Universal product code scannable coupon

Brief Summary Text (3):
Many manufacturers find it desirable to promote the sale of their products by distributing premium coupons to the interested public. The distributed premium coupons have heretofore been separate from the related products and it has been necessary for the checkout personnel to review the purchased articles to ascertain that the products for which the premiums are to be paid have, in fact, been purchased. This review is necessary because premium coupons normally have a dealer redemption return portion which must be returned to the manufacturer in order that the grocery store or retail establishment may claim the premium which has already been deducted from the price paid by the purchaser. This separate review can delay the speed of the checkout with the result that additional checkout personnel and scanners are necessary. Additionally, it is not unknown for the checkout personnel to permit the use of a premium coupon when, in fact, the related goods have not been purchased. Consequently, a new and unique UPC scannable coupon is necessary in order to overcome the above outlined problems.

Brief Summary Text (7):
In view of the above, a new and unique UPC scannable coupon which is adapted for being attached by the ultimate consumer in a pre-oriented relationship so that the scannable indicia may be scanned while the dealer redemption report return portion may be separated therefrom and thus eliminating manual review is necessary. The present invention provides such a consumer attached pre-oriented scannable coupon which may be used in combination with an article to be purchased and an optical scanner system.

L13: Entry 16 of 17 File: USPT Feb 19, 1985

DOCUMENT-IDENTIFIER: US 4500880 A
TITLE: Real time, computer-driven retail pricing display system

Detailed Description Text (2):
Referring now to the drawings, a typical arrangement for pricing control is shown in FIG. 1 comprising a master computer 10 at some central location and which feeds one or more store based, point-of-sale (POS) computers 12. The main computer typically is utilized to store all of the pricing information for the various items or merchandise being offered for sale in the individual stores. The pricing information is either included in or is associated with a unique universal product code (UPC). The UPC code is included on each item of merchandise so as to facilitate the use of automatic check stand equipment. An optical scanner (not shown) "reads" the particular UPC code which the computer then recognizes and supplies the correct price to a cash register without manual entry by the clerk. The pricing information is updated from time to time in the master computer as required.

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L13: Entry 16 of 17 File: USPT Feb 19, 1985

US-PAT-NO: 4500880
DOCUMENT-IDENTIFIER: US 4500880 A

TITLE: Real time, computer-driven retail pricing display system

DATE-ISSUED: February 19, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gomersall; Earl R.	Inverness	IL		
Cipolla; Arthur F.	Chicago	IL		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Motorola, Inc.	Schaumburg	IL			02

APPL-NO: 06/ 280663 [PALM]
DATE FILED: July 6, 1981

INT-CL: [03] G09G 3/00

US-CL-ISSUED: 340/825.35; 340/286M, 340/802, 340/717, 235/385, 235/454, 186/61, 364/464, 364/709
US-CL-CURRENT: 340/5.91; 186/61, 235/385, 235/454, 340/286.06, 340/286.13, 345/2.1, 345/50, 40/448, 705/400

FIELD-OF-SEARCH: 235/383, 235/385, 235/378, 235/454, 364/464, 364/478, 364/709, 364/710, 340/825.34, 340/825.35, 340/717, 340/789, 340/798, 340/799, 340/800, 340/801, 340/802, 340/804, 340/794, 340/795, 340/811, 340/814, 340/784, 340/765, 340/286M, 370/92, 186/52, 186/55, 186/56, 186/61

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL | Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	2919851	January 1960	Otis	186/59
☐	3235713	February 1966	Stern	364/464
☐	3774158	November 1973	Clark	340/717
☐	3991299	November 1976	Chadima, Jr. et al.	235/472
	4002886	January 1977	Sundelin	340/825.35

☐	4028537	June 1977	Snow	235/472
☐	4071740	January 1978	Gogulski	186/61
☐	4293947	October 1981	Brittain	370/92
☐	4305060	December 1981	Apple et al.	340/825.34
☐	4438432	March 1984	Hurcum	340/825.35

ART-UNIT: 264

PRIMARY-EXAMINER: Curtis; Marshall M.

ATTY-AGENT-FIRM: Southard; Donald B. Gillman; James W. Roney; Edward M.

ABSTRACT:

A computer driven, informational display system is disclosed which visually displays selected information in real time. The arrangement is particularly adapted for displaying pricing and other associated information in retail establishments which utilize the standard Universal Product Code for the items of merchandise for sale. The particular bar code forms a unique address for respective remote display modules at selected locations throughout the store. A source of computer-based information is applied to all of the remote display units in parallel. When a particular display module detects its unique address, the information to be displayed, which follows the addressed code, is processed and used to control the operation of an LCD display.

12 Claims, 15 Drawing figures